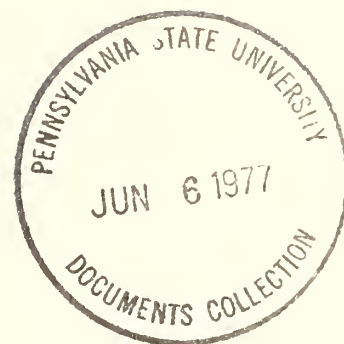


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Interagency Task Force on Product Liability

PB 263 600



PRODUCT LIABILITY:

**Final Report of the
Insurance Study—Volume I
ITFPL-77/03**

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UNDER DIRECTION OF
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6285 Port Royal Road
Springfield, VA 22161

BIBLIOGRAPHIC DATA SHEET		1. Report No. ITFPL-77/03	2.	3. Recipient's Accession No. PB-263 600 Vol I
4. Title and Subtitle PRODUCT LIABILITY: INSURANCE STUDY Defining the Product Liability Problem and Evaluating Possible Remedies From an Insurance Perspective.			5. Report Date January 77 date of	
			6. completion	
7. Author(s) McKinsey & Company, Inc.			8. Performing Organization Rept. No.	
9. Performing Organization Name and Address McKinsey & Company, Inc 245 Park Avenue New York, N.Y. 10017			10. Project/Task/Work Unit No. Interagency Task Force on Product Liability	
			11. Contract/Grant No. 6-36248	
12. Sponsoring Organization Name and Address U.S. Department of Commerce Interagency Task Force on Product Liability Room 2898-C Washington D. C. 20230			13. Type of Report & Period Covered Final Insurance Study	
			14.	
15. Supplementary Notes This report is Section 3 of the Final Report of the Interagency Task Force on Product Liability				
16. Abstracts Personal interviews with 141 members of the insurance community. Review of approx. 3000 underwriting files on product liability cases. A survey of large (over \$100,000) claims closed in 1975. Defined the product liability problem and its causes and evaluated possible remedies. 1. Description of the marketing, underwriting, and rating practices followed by companies that write product liability insurance. 2. Analysis of the trends in the cost of product liability insurance* 3. Assessment of the response of the traditional product liability insurance mechanisms to the problem and the extent to which breakdowns have occurred. 4. Evaluation of possible remedies, with primary focus on those directly affecting the insurance mechanism. *Industrial machinery, grinding wheels, castings, industrial chemicals, automotive components, medical devices, and pharmaceuticals.				
17. Key Words and Document Analysis. 17a. Descriptors Product Liability Prospective Rating Plans Insurance Practices Retrospective Rating Plans Insurance Mechanism Loss Prevention & Control Primary Policies Product Liability Cost Components Excess Policies Potential Remedies Reinsurance - Government initiated Risk Selection Methods - Voluntary Rate Development - Modified Coverage Composite Rating - Loss Control Loss Rating Methods - Workers Compensation modification - No Fault - Mandatory Arbitration - Tort Law modifications				
17b. Identifiers/Open-Ended Terms Product Liability Insurance Mechanisms				
17c. COSATI Field/Group				
18. Availability Statement No Restriction on Distribution			19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 263
			20. Security Class (This Page) UNCLASSIFIED	22. Price

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Advisory Committee on Product
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May 1977

* * * * *

- ITFPL-77 Briefing Report of The Task
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January 1977
- Request N°: P.B. 262-515

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THIS STUDY PREPARED BY:
MCKINSEY & COMPANY, INC.
UNDER CONTRACT TO
THE U.S. DEPARTMENT OF COMMERCE
- Contract No. 6-36248 -

NOTE:

In partial fulfillment of its charter to conduct a study of products liability problems and to make recommendations thereon, the Interagency Task Force on Product Liability, through the Department of Commerce, retained the services of independent contractors for research studies in the industry, insurance, and legal areas.

This product liability insurance study has been prepared by McKinsey & Company and is released for publication to aid in a better understanding of the overall problem.

The findings, conclusions, opinions and recommendations expressed herein are those of the contractor and do not necessarily reflect the findings, conclusions, opinions or recommendations of the Task Force which are set forth in the report of the Interagency Task Force on Product Liability.

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DEFINING THE PRODUCT LIABILITY PROBLEM
AND EVALUATING POSSIBLE REMEDIES
FROM AN INSURANCE PERSPECTIVE

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DEFINING THE PRODUCT LIABILITY PROBLEM
AND EVALUATING POSSIBLE REMEDIES
FROM AN INSURANCE PERSPECTIVE

EXECUTIVE SUMMARY

This report presents the findings, conclusions, and recommendations growing out of our 3-month study undertaken in support of the overall study being conducted by the Federal Interagency Task Force on Product Liability. To gather the information and insights contained in this report, we took the following steps:

1. Interviewed 141 members of the insurance community who are involved in handling product liability insurance. They included:
 - Ninety-one executives of fifteen U.S. insurance companies and one German insurance company
 - Ten executives of three reinsurance companies
 - Fifteen brokers and agents and reinsurance brokers
 - Five developers and managers of captive insurance companies
 - Four Lloyds of London underwriters
 - Eight representatives of two insurance industry trade associations
 - Eight representatives of the Insurance Services Office (ISO), the industry's major statistical and ratemaking organization.
2. Analyzed information that members of our Firm extracted from approximately 3,000 underwriting files covering product liability exposures in six of the largest insurance companies writing this class of business.
3. Analyzed data on rates and loss experience provided by the Insurance Services Office.

4. Reviewed and analyzed responses to questionnaire surveys conducted by the Independent Insurance Agents of America, RETORT (an organization of 80 manufacturers formed to promote "reason and equity in tort"), the Risk and Insurance Management Society, and various manufacturers' trade associations.
5. Reviewed the results of an analysis performed by the American Mutual Insurance Alliance of 79 large (over \$100,000) closed product liability claims and preliminary findings emerging from a study of some 20,000 closed claims (7,800 of which have been processed to date) being conducted by ISO.
6. Obtained information related to product liability insurance availability supplied by six state insurance departments at the request of the National Association of Insurance Commissioners.

In support of the broad objectives of the overall study - i.e., to define the product liability problem and its causes and to evaluate possible remedies - our specific objectives were to:

1. Describe the marketing, underwriting, and rating practices followed by companies that write product liability insurance
2. Analyze trends in the cost of product liability insurance, focusing on eight product categories*
3. Assess the response of the traditional product liability insurance mechanisms to the problem and the extent to which breakdowns have occurred
4. Evaluate possible remedies, with primary focus on those directly affecting the insurance mechanism.

This executive summary highlights our findings and conclusions for each of the four objectives and presents our recommendations on the steps to be taken next in light of our conclusions.

* - Industrial machinery, industrial grinding wheels, ferrous and non-ferrous metal castings, industrial chemicals, automotive components, aircraft components, medical devices, and pharmaceuticals.

PRACTICES OF PRODUCT LIABILITY INSURERS

The key to understanding product liability insurance practices is to recognize that this form of coverage is almost always written along with several other types of coverages as part of a Comprehensive General Liability or "commercial package" policy. (We found only 10 "products only" policies in our underwriting file review.) Except for a few products with high exposure to large losses, such as aircraft components and grinding wheels, commercial firms and insurers until recently considered product liability as no more significant than other exposures in the total range of insurance coverages needed.

In providing liability coverages, the "primary" insurer assumes primary responsibility for claims handling. According to our file analysis, this insurer will generally write up to a maximum annual aggregate limit of liability of \$250,000 to \$1 million for products. The insured, generally through an agent or broker, will usually purchase one or more additional layers of coverage from one or more companies writing "excess" insurance.

Both the selection of risks and the determination of premiums for product liability coverages are highly judgmental. Although most large insurers have developed lists of high-hazard products they prefer to avoid, few companies are absolutely unwilling to make exceptions if the account as a whole looks sufficiently attractive - e.g., has other safer coverages. Similarly, although the pricing process often begins with statistically derived "basic limits" rates,* the insurer usually determines the final rate by applying one or more judgmental modifications. Also, many hazardous products are so specialized that the industry has not compiled sufficient exposure and loss data for actuarial rate making purposes. Thus, rates for these products are based almost entirely on the underwriters' judgment.

* - Rates that would apply for per occurrence limits of \$25,000 bodily injury and \$5,000 property damage and annual aggregate limits of liability of \$50,000 for bodily injury and \$25,000 for property damage (a minimum level).

TRENDS IN PRODUCT LIABILITY INSURANCE COSTS

Until 1975, basic limits "manual" product liability rates remained at the level prevailing in 1962. Premiums, however, did increase with inflation since, in determining the premium to charge, the insurer typically applies the rates to the insured's sales volume. Continuation of constant rate levels during a 13-year period implies that the industry noticed no significant increase in the frequency and severity of product liability claims.

From 1972 to 1974, however, the total number of product liability claims reported to ISO decreased 6 percent* and the severity, or cost of the average settlement, jumped over 180 percent, from \$6,800 to \$19,500. In response to these developments, ISO revised its manual rates.** The revisions, which ISO filed with state insurance departments in 1975 and 1976, averaged 83 percent cumulatively. But the range was enormous, going all the way from minor decreases in some product classes to a 660 percent increase in one. In the product classes for which rates are established mainly on the basis of judgment, interviews and our underwriting file analysis indicate that the increases were generally greater than in the "manually rated" categories.

It is important to note that rate increases that seem huge when viewed in isolation are not nearly so huge when viewed as a percentage of sales in some industries. In the eight target product categories, it would appear that the rates have increased significantly - in the range of 100 to 500 percent during 1976. Yet, for only 20 percent of the 54 products in these categories do the current rates amount to more than 2 percent of sales for a \$500,000 aggregate primary limit. (Rates for three product classifications are over 5 percent of sales.)

Insofar as recent rate increases appear to represent a correction for past rate inadequacy, it seems unlikely that product liability rates will rise sharply in the future as they have in the past 2 years. At the same time, since judgment is a major factor in determining rates, and since an underwriter must exercise this judgment in a highly uncertain tort litigation climate, we conclude that rates will probably continue to increase, though at a more modest pace, unless there is discernible evidence that the trend toward absolute liability and overly generous product liability awards has been halted.

* - 14,190 bodily injury claims in 1972 to 13,350 bodily injury claims in 1974.

** - "Manual rates" are rates for product classes for which ISO has compiled exposure and loss experience data (about 66 percent of the product classes, accounting for 10 percent of the premiums). The mechanism to collect data on the remainder of these classes has been set in place, and data on them will be available in 1977.

THE RESPONSE OF THE INSURANCE MECHANISM

Not only have insurance companies been increasing rates for product liability coverage over the past 2 years, but they have been generally unwilling to write new accounts having products they consider especially hazardous. In addition, they have been refusing to renew accounts with bad experience or with exposures they regard as particularly vulnerable to large losses. Their reluctance stems from two factors:

1. A conviction that trends in the tort litigation system have made product liability losses highly unpredictable, thereby rendering certain products extremely difficult to insure.
2. The need felt by many major insurers in this market to contain their overall writings to avoid raising premium-to-surplus ratios above levels considered financially prudent. When insurance companies have to be selective for financial reasons, they naturally choose to write the more predictable, lower-risk lines.

Some insurance companies have reduced the limits of liability they will accept; a few have imposed coverage restrictions, such as excluding new products. We also note some increase in the use of facultative reinsurance - i. e., reinsurance of specific risks.

Despite these measures, it is usually possible for the policyholder with more than \$10 million sales to retain essential coverage by making some adaptation - e. g., assuming a large deductible, accepting a retrospective rating plan. For the smaller firm, particularly the single-product firm, these adaptations are not as feasible. The account is not large enough for its own experience to have credibility for the insurer, and it does not have the financial resources to share a significant proportion of the risk burden itself.

For small firms that manufacture nothing but long-life products such as industrial machinery, the problem is especially acute. Many of these firms have exposures that may amount to 10 to 20 times the current year's production - i. e., machines now in use that were sold over many years' time. Thus, in developing a rate to be applied to the current year's sales, the insurer must multiply the loss potential per machine 10 to 20 times. After considerable effort, we have identified by name 62 companies that have either been unable to obtain product liability insurance or elected to go without it because they felt the cost was prohibitive. Of these, at least 22 are industrial machinery firms.

A sizable amount of the product liability business that the traditional insurers have refused in the past year apparently has gone to "surplus lines" insurers. By now, these insurers may be saturated. In fact, at least one of the active participants in this market recently gave notice that it had absorbed more product liability business than it could comfortably handle.

Of the eight target product categories selected for particular attention, all appear to be having trouble obtaining insurance except industrial grinding wheels and aircraft components. Both these industries recognized the product liability problem years ago and took steps to reduce losses by improving design and quality control and bringing expertise to bear on claims handling and defense. In each case, trade associations and insurers were also involved. In grinding wheels, a single insurance company, which handled a large proportion of the business, played a leading role; in aircraft components, the insurance companies formed two major pools, in effect creating two specialized insurers to spread the risk and provide product expertise. Although these product categories have not been immune to the adverse trends in tort litigation, they seem to be weathering the storm better than the other product categories.

Other groups of manufacturers have also attempted to get together to form captives or to establish a working arrangement with a single carrier. The extent of this activity is far less than one might expect, however, and it is difficult to determine why - whether it is because of tax considerations (premium payments to a captive insurance company are subject to tax questions), the desire for independence, lack of financial resources, or fear of the unknown. One of the roadblocks to launching group arrangements may be the fact that the cost and availability problems fall most heavily on small firms, which do not have the resources needed to form an insurance company or to interest an insurer or reinsurer. Although the larger firms have such resources, the problems they face may not be severe enough to cause them to join in a cooperative venture.

Thus, at the moment, we see few indications that the problems of availability and cost will be solved by association arrangements of the types that have proved successful in the past. However, the previous success stories and the concentration of current problems in only a few industries suggest that association arrangements could play a greater role in alleviating current problems. Removing some of the existing regulatory impediments to association arrangement could stimulate progress in this area.

EVALUATION OF
POTENTIAL REMEDIES
AND RECOMMENDED ACTION

In considering potential remedies for the product liability insurance problem, we must keep in mind certain key conclusions about the nature and causes of the problem:

1. Although the cost of product liability insurance has increased substantially in most industries, the problem of increasing costs is severe in only a few industries, such as industrial machinery, industrial chemicals, automotive components, and pharmaceuticals.
2. The problem of availability and affordability of product liability insurance is concentrated in the smaller firms in those industries.
3. The availability problem could be temporary since one of its causes - the thin surplus position of insurance companies - could change quickly with a sharp improvement in overall underwriting profits. The cost problem is less likely to be temporary (even though the recent sharp rate of increase will probably not continue) since it is caused primarily by the perceived increase in the frequency and severity of product liability claims arising from the erosion of defenses in the tort liability system and the growing tendency of the courts to grant plaintiff's highly generous awards.
4. Some of the factors that contribute to increasing claims costs apply to all forms of liability; others, such as a manufacturer's liability for products made years ago and the tendency for courts to hold manufacturers liable even when products are altered or misused, relate specifically to the product liability problem.
5. Since most products are sold and used in many states, the tort law would have to be modified in the most populous states to have any impact on insurance costs.

Given this number of dimensions, the product liability problem can be attacked from several angles. Broadly speaking, the remedies we have considered are of two types:

A sizable amount of the product liability business that the traditional insurers have refused in the past year apparently has gone to "surplus lines" insurers. By now, these insurers may be saturated. In fact, at least one of the active participants in this market recently gave notice that it had absorbed more product liability business than it could comfortably handle.

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Given this number of dimensions, the product liability problem can be attacked from several angles. Broadly speaking, the remedies we have considered are of two types:

1. Remedies aimed at either expanding the availability of insurance or more directly at assuring compensation for victims
2. Remedies aimed at containing the cost of product liability insurance through:
 - Reducing product hazards
 - Modifying or replacing in whole or in part the tort liability system.

Although these remedies have different primary purposes and are aimed at different aspects of the product liability problem, they are interrelated. To the extent that the cost of product liability insurance can be reduced, the insurance will become more affordable. To the extent that more insurance is available, concern about uncompensated victims of defective products will diminish.

Expanding the Availability of Insurance

As we suggested earlier, there is a reasonable chance that the availability problem associated with product liability insurance will solve itself, and that the cost problem will continue to grow unless trends in court and jury attitudes are reversed. Should an availability problem of serious proportions develop, however, it will demand much more direct and immediate action than the cost problem. To deal with such an eventuality, we conclude that it would be desirable to establish a standby mechanism that could be activated to ease the problem quickly.

Form of the mechanism. The mechanism could take a number of forms. The most practical and effective, in our judgment, is for the Federal Government to provide reinsurance or excess insurance, or both, in a manner similar to the flood insurance program but with no intent to subsidize the insured. Under this plan, the primary insurers could limit their liability as some are now doing. At the same time, this approach avoids disturbing relationships that are important for effective loss control and claims handling, and the Federal Government could easily withdraw when the climate for writing product liability risks improves. However, the "no subsidy" policy would mean that coverage would not be cheaper over the long run than in the private insurance market (assuming equal efficiency) and that the insured would be required to meet reasonable standards for loss prevention.

One danger in authorizing such a program, even on a standby basis, is that this action may be viewed as a solution of the product liability problem. Actually, establishing another risk transfer mechanism will contribute nothing to removing the fundamental problem - the rising cost of product liability claims. Only reducing product-related accidents and tort reform can achieve that goal. Even a deliberate subsidy would not be effective. Further, we believe that a subsidy would be inequitable and would weaken incentives to improve product safety. We therefore urge that authorization for a standby mechanism expire 3 years from the date it is granted. This deadline makes it clear that the act of creating a standby mechanism in no way relieves the pressure to substantively reform the tort system. In fact, the law creating the mechanism could specify that extension of coverage would not be available in any state that did not enact certain tort reforms.

Procedure for activating the standby mechanism. Along with the authorization of a standby mechanism, it is important to define a procedure and criteria for determining when the availability problem has reached a point that requires activating the mechanism. As we see it, the procedure could be as follows:

1. Through state insurance departments, trade associations, and other interested organizations, systematically collect the names of firms that say they are having availability problems.
2. Follow up these reports with telephone interviews to determine the exact nature of the problem - i.e., is coverage not available, or is it a matter of cost? If cost, how did the lowest quotation compare with the previous premium as a percentage of sales?
3. If the evidence accumulated through this monitoring indicates that the problem is growing, hold a public hearing and invite all firms identified as having availability problems.
4. If evidence indicates the problem is severe, explore with private insurers possibilities for a strictly voluntary pooling arrangement. If this is not feasible, activate the mechanism.

If this action is taken, we believe that remedies aimed directly at ensuring compensation to victims of accidents involving defective products will not be necessary - i.e., mandatory product liability insurance or uncompensated victims' funds. Enforcing mandatory product liability insurance would be a regulatory nightmare. Uncompensated victims' funds would be a more practical solution if direct evidence of a need develops;

they could be established by states through general revenue funds, supplemented by punitive damage awards paid to the states rather than the plaintiffs.

Besides the standby mechanism, two other steps could ease the availability problem. The first is to change the regulations affecting the income tax treatment of premiums and surplus contributions paid to captive insurance companies or set aside to fund risk-retention programs. This step will remove one obstacle to the formation of captives and could foster association programs that assure availability and reduce insurance costs through coordinated loss prevention and claim defense efforts. Although we believe that this remedy should be pursued, we realize that tax treatment is only one of many hurdles in forming association programs. We therefore do not view the remedy as a realistic solution to a serious availability problem.

The second step, which we consider equally important in ensuring the long-term availability of product liability insurance through the private insurance system, is to capture more comprehensive data on product liability losses. If insurers have a better fact base for determining product liability premiums, they will have greater assurance that their premiums are adequate and they will be more willing to write the business. Better data will also help convince insureds and the public that whatever rates are charged are fair in relation to reasonable loss expectations for the type of risk being covered. The Insurance Services Office has already taken steps to develop more comprehensive exposure and loss information for product liability coverages. We believe that ISO's current plan to implement expanded data collection and analysis is ambitious yet realistic, and we urge that it be given top priority.

We are aware that some coverage modifications are being considered to ease the availability problem. Our review of these proposals convinces us that they accomplish little that would have a major impact on the problem and still meet policyholders' needs.

Reducing the Cost of Product Liability Insurance

There are two ways to reduce the cost of product liability insurance. One is to reduce the number of accidents by improving product design, quality control, and instructions and labeling for users. The other is to modify or replace the tort liability system.

Product safety measures. With the passage of the Consumer Product Safety and the Occupational Safety and Health Acts, the Federal Government has become more deeply involved in efforts to establish and enforce standards that will reduce the number of injuries. Experience with the implementation of this legislation is convincing evidence that progress comes slowly. It is not easy to set effective standards or develop qualified inspectors. Although existing legislation could be better implemented, it is unrealistic to expect dramatic results within a short time.

It has been suggested that the insurance mechanism could be used more effectively to stimulate loss prevention efforts. We agree. As with the establishment and enforcement of Federal safety standards, however, we believe that it would be unrealistic to expect dramatic results. The incentive for insurers and manufacturers to attach a high priority to loss prevention already exists, and it has been enhanced by the recent rise in product liability insurance losses and premiums. We believe that this incentive, coupled with the collection and dissemination of better information on the causes of product liability claims, should serve to stimulate a more aggressive and better targeted pursuit of loss prevention opportunities.

The tort liability system. The most potentially fruitful area for action to curb the sudden growth in product liability insurance costs involves changing the tort liability system - restoring some of the defenses that have been lost by judicial interpretation over the past 10 years, reducing friction costs such as legal fees, and setting realistic guidelines for awards.

Potential changes in the tort system can be classified in several ways. For purposes of developing an action program, we believe that it is useful to group them in terms of the liability cases that would be affected. Viewed in this light, the potential remedies fall into three categories:

1. Remedies that affect only product liability cases involving workplace injuries
2. Remedies that affect product liability cases generally
3. Remedies that affect all types of liability cases.

1. Changes affecting only workplace injuries. A key proposal in this category is to make workers' compensation the sole remedy for workplace injuries involving defective products. If this change were made:

- Manufacturers of industrial machinery, including the manufacturers of long-life industrial machinery that have been hit so hard by the recent product liability cost escalation, would see a substantial reduction in their product liability problem.
- There would be no need for other remedies that relate specifically to workplace injuries, such as permitting the supplier to recover damages from an employer through applying the indemnity or contribution principle; establishing the validity of hold harmless clauses; and prohibiting subrogation by worker's compensation carriers.

A major practical obstacle to implementing this remedy is that it will undoubtedly require increasing worker's compensation benefits so that workers receive a quid pro quo for giving up their right to sue their employers' suppliers. Whether an increase in benefits is feasible and desirable needs to be carefully evaluated. Since we believe that this proposal holds promise, we recommend that it be studied further.

2. Changes affecting product liability cases generally. Remedies that pertain only to product liability cases but are not limited to workplace injuries are:

- a. Modifying the statutes of limitations to begin when the product enters the stream of commerce
- b. Establishing misuse defense
- c. Clarifying the basic standard of responsibility with regard to:
 - "Unavoidably unsafe"
 - "Useful life" of a product.

We believe that most of these modifications should be considered further for possible inclusion in a model tort law. Although the eventual

impact on product liability insurance costs could be substantial, insurers will probably wait to see how the courts interpret the legislation before responding in their pricing decisions.

Other remedies that relate specifically to product liability are the various forms of no-fault proposals: (a) the "universal" or New Zealand system; (b) the O'Connell system, in which a manufacturer may elect no-fault for some or all of his products; and (c) the Freedman system, in which the injured party may either accept no-fault compensation or bring a tort liability suit. In our view, all three of these approaches would be difficult to implement and too costly and burdensome to administer to warrant further consideration.

3. Changes affecting all liability cases. These remedies apply broadly to liability cases of all kinds:

- a. Establishing a declining scale for attorney's contingent fees
- b. Regulating expert testimony
- c. Using periodic payments for awards
- d. Limiting damages for pain and suffering
- e. Limiting punitive damages and directing such payments to state funds
- f. Establishing the comparative fault principle
- g. Modifying the collateral source rule to allow the introduction of collateral source payments as evidence
- h. Making arbitration mandatory.

We believe that some of these changes should be included in new tort laws. Although it is impossible to estimate their impact on the cost of product liability insurance, such a change in the law could be beneficial in this respect: It may be interpreted as representing a change in the attitudes of people about the best balance of interests involved in tort liability cases.

We recognize that it is not customary for the Federal Government to take the initiative in modifying common law practices. Were we to rely solely on state initiative, however, we probably would not see any significant effect

on product liability insurance costs over the next 5 years. We therefore believe that any serious effort to seek modifications in tort law as a means of reducing product liability insurance cost in the foreseeable future should begin with the development of model legislation at the Federal level and include incentives for early state adoption.

In summary, we propose the following actions:

1. Develop appropriate legislation creating, on a standby basis:
(a) a Federal facility to provide excess insurance and reinsurance for product liability risks, and (b) a system for monitoring the availability of product liability insurance so that the government can determine whether this mechanism should be activated.
2. Identify and evaluate actions the Federal and state governments can take to remove impediments to: (a) the formation of captive insurance companies and well-managed risk-retention programs by individual firms, and (b) coordinated insurance programs by groups of firms in the same industry.
3. Develop proposed model tort legislation based on further evaluation of the specific possibilities for change included in this study. (Data from ISO's closed-claim study, which will be available in detail in 1977, will provide a good basis for evaluating the economic impact of some of these changes.)
4. Evaluate in greater depth the feasibility and desirability of making workers' compensation the sole remedy for workplace injuries and recommend appropriate action.

The following chart provides an overview of our evaluation of the various tort modification possibilities suggested for review. This evaluation uses the six criteria established by the Task Force on Product Liability.

PRODUCT LIABILITY REMEDY EVALUATION MATRIX

REMEDY	CRITERIA							OVERALL CONCLUSION
	Increase Availability of Insurance	Expedite Reparation Process	Place Incentive for Risk Prevention on Parties Best Able to Implement	Minimize Accident Costs and Prevention Costs	Assure Injured Party of Reparations	Is Feasible		
I. <u>Modification of the Law Regarding Defenses and the Presentation of Claims</u>								
• Basic standard of responsibility	++	0	-	0	-	+	}	High impact on availability. Effectiveness depends upon judicial interpretation; therefore time frame for impact would be long. Pursue.
- Unavoidably unsafe	++	0	0	0	-	+		High impact on availability. Low feasibility. Drop.
- Useful life	++	0	-	-	-	--		
• A compliance with legislative or administrative standards defense	+	0	0	0	-	++		Less flexible, but more feasible than "useful life." Would have quickest impact for selected products. Pursue.
• Modification of the statute of limitations defense	+	0	-	0	-	-		Far more complex than "useful life" or "statute of limitations." Drop.
• The state of the art defense	+	0	+	0	-	+		Clarification of obligation to warn is required. Effectiveness depends upon judicial interpretation; therefore time frame for impact would be long. Pursue.
• Establishment of a misuse defense	0	0	+	0	0	+		Insurance impact questionable, but concept inherently equitable. Pursue.
• Comparative negligence or comparative fault	0	0	0	0	0	+		Minimal insurance impact, but desirable on other counts. Pursue.
• Regulation of expert testimony								
II. <u>Modification of the Law Regarding Damages</u>								
• Attorney's fees	+	0	0	+	-	+		Insurance impact uncertain. In theory, should have favorable rate impact in long term. Pursue.
• Regulation of awards for pain and suffering and other general damages	+	+	0	0	0	0		Impact on cost would depend on schedule established. A generous benefit schedule could lead to zero or increased cost impact. Reduced uncertainty would improve insurance availability. Pursue.

ES

• Positive or favorable impact

- + Positive or favorable impact
- Negative or unfavorable impact
- 0 Neutral or questionable impact

CRITERIA

REMEDY	Increase Availability of Insurance	Expedite Reparation Process	Place Incentive for Risk Prevention on Parties Best Able to Implement	Minimize Accident Costs and Prevention Costs	Assure Injured Party of Reparations	Is Feasible	OVERALL CONCLUSION
II. <u>(Continued)</u> . Modification of the col- lateral source rule . Restriction on punitive damages . A periodic payment system	+	-	0	+	0	+	Admission as evidence would seem equitable. Use as reduction of damages may depend on "public" versus private source. Pursue.
III. <u>Modification of the Law Regarding a Defendant's Rights Against Third Parties</u> . Contribution and indemnity . Hold harmless clauses	+	0	0	+	0	+	Limited impact at present, but desirable. Pursue.
. Prohibition of subrogation in workers' compensation cases	0	0	0	0	0	+	Impact limited, but clearly desirable as option. Pursue.
IV. <u>Limited Product Liability No- Fault Approaches</u> . No-fault	0	+	-	-	+	-	High impact for creating employer safety incentives, but could expand existing liability problems and increase litigation costs if unlimited. Pursue if limited to extent of workers compensation benefits. Impact limited. General validation undesirable because of potential for abuse of market power. However, establishing guidelines for specific applications may be desirable. Pursue. If cost savings appear sufficient, insurance industry can initiate action. Overwhelming practical problems. Impossible to estimate costs. Drop.

CRITERIA

REMEDY	OVERALL CONCLUSION
IV. (Continued)	
Workers' compensation as a sole source of recovery - abolishing workers' third party claims	Major impact on products used in the work place. Major obstacle is the increase in worker's compensation benefits required to offset loss of common law rights. Pursue.
Mandatory arbitration of all products liability claims	Nonbinding arbitration feasible. Impact speculative. Pursue for selective implementation.
Is Feasible	Is Feasible
Reparations	Reparations
Party of Injured	Party of Injured
Assure	Assure
Costs	Costs
Prevention	Prevention
Accident	Accident
Minimize	Minimize
Best Able to	Best Able to
on Parties	on Parties
Risk	Risk
Incentive for	Incentive for
Place	Place
Expedite	Expedite
Reparation	Reparation
Process	Process
Affordable	Affordable
Insurance	Insurance
Availability of	Availability of
Increase	Increase

CHAPTER 1

HOW PRODUCT LIABILITY INSURANCE

IS CURRENTLY PROVIDED

CHAPTER SUMMARY

This first chapter of our report is intended to provide an understanding of how product liability insurance fits into the insurance universe; how this coverage is marketed, underwritten, and priced; and what services insurers provide to product liability policyholders.

In this chapter, we present relevant findings and conclusions growing out of our review of 3,000 underwriting files in 6 insurance companies and interviews with:

- ¶ Over 90 insurance executives handling product liability coverage in 15 major companies
- ¶ Fifteen insurance brokers and agents in the United States and the United Kingdom
- ¶ Five risk and insurance management consultants.

This chapter is aimed at providing an understanding of how the insurance mechanism works rather than evaluating the appropriateness or effectiveness of existing practices. Nevertheless, there are a number of key points discussed that are significant in understanding the causes of the product liability insurance problem and in evaluating possible remedies. These are as follows:

- ¶ The insurance mechanism is simply a method of spreading and sharing risks; it works best when losses for a class of risks over a period of time are reasonably predictable.
- ¶ Product liability insurance is almost always provided along with other commercial coverages, either as part of a Comprehensive General Liability policy, covering a variety of liability exposures, or as part of a commercial package policy, which also includes property coverages.
- ¶ Approximately 85 percent of the product liability insurance is purchased through independent agents and brokers (the balance

goes mainly through exclusive agents). Independent agents and brokers do business with a number of insurance companies and also have access to surplus lines (nonadmitted) companies principally through surplus lines brokers for risks that are hard to place in the regular market.

- ¶ Liability insurance, including product liability, is generally written in two or more "layers." The first, or bottom, layer is known as the "primary layer" and generally covers losses up to an annual aggregate limit of \$250,000 to \$1 million, excluding legal defense costs, which are also covered but are not typically subject to policy limits. Additional layers, known as "excess" layers or "umbrella" policies, are usually also purchased through the agent or broker to provide protection in case losses exceed the primary limit. The primary insurer assumes the major responsibility for claims handling. Both the primary and excess insurers typically reinsure a portion of the risk.
- ¶ Decisions to accept or reject product liability risks are generally made by insurance company underwriters located in the field who follow underwriting guidelines that reflect the experience and judgment of the company's best underwriters. In recent years, these guidelines in most companies have specified certain products to be avoided or written only very selectively, generally requiring home office approval. Most companies also require a survey by a loss control specialist before writing liability coverage for products they consider particularly risky.
- ¶ Underwriters are also responsible for determining the premiums to be charged. This determination is made in a number of ways. Smaller risks are usually written on a guaranteed cost basis. Large risks are often written on a retrospective basis, so the premium charged varies with the actual loss experience for the current year. While actuarial analysis of loss experience enters into the determination of premiums for some products, the final premium charged is heavily affected by underwriting judgment since the rating plans used provide opportunities for judgmental modifications.
- ¶ Because of the way premiums for commercial risks are determined and the flexibility permitted in selecting rates for products with variable risk factors, rate regulation by the states has not been

a major factor in controlling premiums for commercial liability risks or in inhibiting insurers from charging rates that they consider adequate.

- ¶ Until recently, data on only about 10 percent of product liability premiums and losses have been collected and reported by insurers to the Insurance Services Office (the industry's statistical and rate-making agency) in sufficient detail to be used for rate-making purposes. The scope of product liability data reporting has been considerably expanded in the past 2 years, and the number of product classifications for which actuarially determined rating factors can be used should be increased substantially next year.
- ¶ The two principal services provided to policyholders by primary insurers and by large agents and brokers are loss control and claims handling services. As the product liability problem has become more severe, some insurers have developed small cadres of specialists in certain types of products. It should also be recognized that the principal function of the loss control engineer is to provide information for underwriting purposes and that the only power the insurer has to enforce loss control recommendations is to increase premiums or refuse to continue coverage.

The more detailed description of product liability insurance practices from which these points emerge is presented in the following five sections:

- A. The Insurance Mechanism
- B. The Commercial Insurance Market
- C. The Underwriting of Product Liability Insurance
- D. How Product Liability Premiums Are Determined
- E. Services Provided to Policyholders.

As an appendix to this chapter, we provide a description of the procedure we followed in conducting our review of approximately 3,000 underwriting files in six major companies, including the procedure used for selecting files to be reviewed. We also provide a statistical summary of the major findings coming out of this review concerning types of policies written and underwriting and rating practices used.

A - THE INSURANCE MECHANISM

Insurance is a method of financing risk - i.e., the chance of loss. Through insurance, this chance of loss is transferred from the insured to the insurer for a consideration - a premium. The insurer, or professional risk bearer, expects premium dollars to cover loss costs and underwriting expenses so that the company shows a satisfactory return on the capital at risk. Although the investment income earned on insurance reserves contributes to the overall return from insurance operations, most insurers prefer to use this income to finance growth.

For all classes of insurance, each potential policyholder presents "exposures" - that is, types of potential risks - to the insurer. Underwriters attempt to classify risks so the exposures within each class are similar in character and loss potential. Thus, loss costs should, in theory, be reasonably predictable for a class of risk.

The premiums set to cover loss costs may be regarded as probabilistic estimates of future claims and expenses for a pool of exposures. To be statistically credible, these estimates should be based on a sample of similar events. Further, to permit the insurer to determine the appropriate premium with a fair degree of accuracy, the "law of large numbers" should function. (The greater the number of observations, the closer the actual result will be to the predicted result.) Ideally, insurers try to group similar risks for the purpose of gathering accurate premium and loss statistics and determining the premium each insured exposure unit should pay. In practice, however, they usually make rates for aggregated classes and then use judgment to determine the rate that should be applied to subdivisions of those classes. Because of the need for judgment, insurers are vulnerable to the possibility of making a series of bad guesses about the "average" severity of loss and the average number of expected losses. As recent results have shown, these bad guesses can add up to enormous underwriting losses that threaten the financial stability of both large and small insurance companies.

In light of these statistical fundamentals, insurers seek to avoid underwriting exposures that involve a high degree of uncertainty about future loss frequency and severity and to control their exposure to catastrophic risks.

Thus, they may: (1) use risk-sharing devices such as reinsurance and pooling; (2) assume the risks only on the basis of some relationship to surplus; or (3) refuse them altogether. Sometimes, however, insurers "look for a way" to underwrite the more unpredictable exposures because they want to retain the more stable and less hazardous elements of an account (e. g., the account's property coverages or worker's compensation) or because the insured is able to absorb some of the loss costs himself.

To understand how product liability insurance is provided, we must recognize that the process involves the interplay of a number of dynamic forces: the quality of manufactured products, the use made of these products; the rules of law, and the risk selection and pricing process. Since each of these forces is dynamic, rates charged for insurance are only "roughly right" at best even when they are based on the actuarial projections of past experience. And because insurance is a loss-spreading mechanism, when technology develops new products with unknown hazards and loss potential or when new legal precedents limit defenses, insurers must respond judgmentally by adjusting their rates to reflect these changing loss-producing factors.

B - THE COMMERCIAL INSURANCE MARKET

Product liability insurance falls in the category of commercial insurance. This section describes the companies that write commercial lines, the producers that sell them, and the agencies that regulate them.

COMPANIES WRITING COMMERCIAL INSURANCE

Commercial insurance is written by three types of insurers: (1) large, multiline companies that produce their business through independent agents and brokers who represent more than one insurance company; (2) "direct writing" companies that produce insurance through their own exclusive agents; and (3) specialty companies that write insurance through independent agents and brokers and concentrate on a few geographical areas or certain types of coverages. Exhibit B-1 shows the writings of these three groups in 1975. Since product liability premiums, losses, and expenses are not reported as a separate class, product liability insurance is lumped in the miscellaneous liability category. This fact makes the overall profitability of this line impossible to measure on an industry-wide basis.

The three types of insurers may be organized as:

- ¶ Stock companies - i.e., profit-making corporations
- ¶ Mutual companies - i.e., nonprofit corporations owned by policyholders; any excess income produced by mutuals and not used to finance growth is either returned to policyholders as dividends or used to reduce premiums
- ¶ Reciprocal, which are similar in operation to mutual companies. They are often, but not exclusively, organized by trade associations for the purpose of exchanging automobile insurance contracts.
- ¶ Lloyd's associations, groups of individuals that operate like Lloyd's of London. These organizations are also referred to as American Lloyd's. They differ from mutuals because they are not incorporated, and from reciprocals because they write insurance for nonmembers.

COMMERCIAL LINES PREMIUM VOLUME WRITTEN IN 1975

BY MAJOR TYPES OF INSURERS

Lines of Insurance	Large Independent Agency Companies		Direct Writers		Specialty Companies	
	Premiums in \$ Millions	Proportion (Percent)	Premiums in \$ Millions	Proportion (Percent)	Premiums in \$ Millions	Proportion (Percent)
Fire	\$1,202.0	8.8%	\$ 314.6	8.1%	\$ 572.8	13.0%
Allied Lines	620.5	4.5	201.2	5.2	350.6	8.0
Commercial Package	2,642.9	19.3	238.0	6.1	575.3	13.1
Worker's Compensation	3,760.9	27.5	1,527.1	39.3	1,055.8	24.0
Miscellaneous Liability*	2,604.0	19.1	569.2	14.7	780.5	17.7
Commercial Auto Liability	1,412.0	10.3	519.2	13.4	522.8	11.9
Commercial Physical Damage	610.9	4.5	300.1	7.7	291.7	6.6
Inland Marine	814.2	6.0	212.0	5.5	255.7	5.7
Total All Commercial Lines	<u>\$13,667.4</u>	100.0%	<u>\$3,881.4</u>	100.0%	<u>\$3,405.2</u>	100.0%
Percentage of Miscellaneous Liability Coverage Written By Major Types of Insurers	\$ 2,604.0	65.9%	\$ 569.2	14.4%	\$ 780.5	19.7%

\$3,953.7

Total
Miscellaneous:
Liability

Exhibit B-1

* - \$700 million represented Medical Malpractice in 1975.

Source: Best's Executive Data Service, 1976.

- ¶ "Captive insurance companies - i.e., companies organized to write the risks of their parent and the parent's other subsidiaries.

The total volume and the miscellaneous liability volume written by four of these types are shown in Exhibit B-2. No volume figures are available for the captive companies, which are often organized offshore in places like Bermuda and the Caribbean islands. According to the brokers and captive insurance company managers we interviewed, few of the captives are organized for the specific purpose of insuring product liability. The only two specifically identified were the captives for a manufacturer of pharmaceuticals and a manufacturer of machine tools, although there probably are more.

Some insurers specialize in writing large accounts, others in writing package policies. Some prefer high-risk coverages, others avoid them. A few companies have developed expertise in certain industries and products and concentrate on writing insurance for these exposures.

As for the volume of product liability insurance they write, the insurers we interviewed could give us only rough estimates, with varying degrees of confidence, because they do not maintain separate statistics for this line. They mentioned two reasons for not doing so:

- ¶ First, their management information systems are directly related to their external reporting requirements. To date, regulators have not required separate reporting of product liability business. The same was true of medical malpractice insurance prior to 1975; however, owing to the "crisis" in that line, state regulators now require that insurers report premiums and losses for this coverage separately from the other miscellaneous liability statistics.
- ¶ Second, since product liability coverage is invariably thrown in with the insurer's other liability coverages, insurance company management had - until recently - been more interested in the account's overall liability experience than in the performance of any one coverage included within the family of liability coverages. (Exceptions noted were aircraft products, foods, pharmaceuticals, and other obvious high-risk products, which have always received close scrutiny.) And from a marketing perspective, policyholders were said to be more interested in the relationships among their total coverage, total premium, and overall loss experience than the individual experience on any subline of coverage. During our interviews, it was evident that this attitude toward product liability exposures is beginning to change and that insurers are paying far stricter attention to them than they did 5 years ago.

TOTAL PREMIUM VOLUME AND MISCELLANEOUS LIABILITY PREMIUM VOLUME

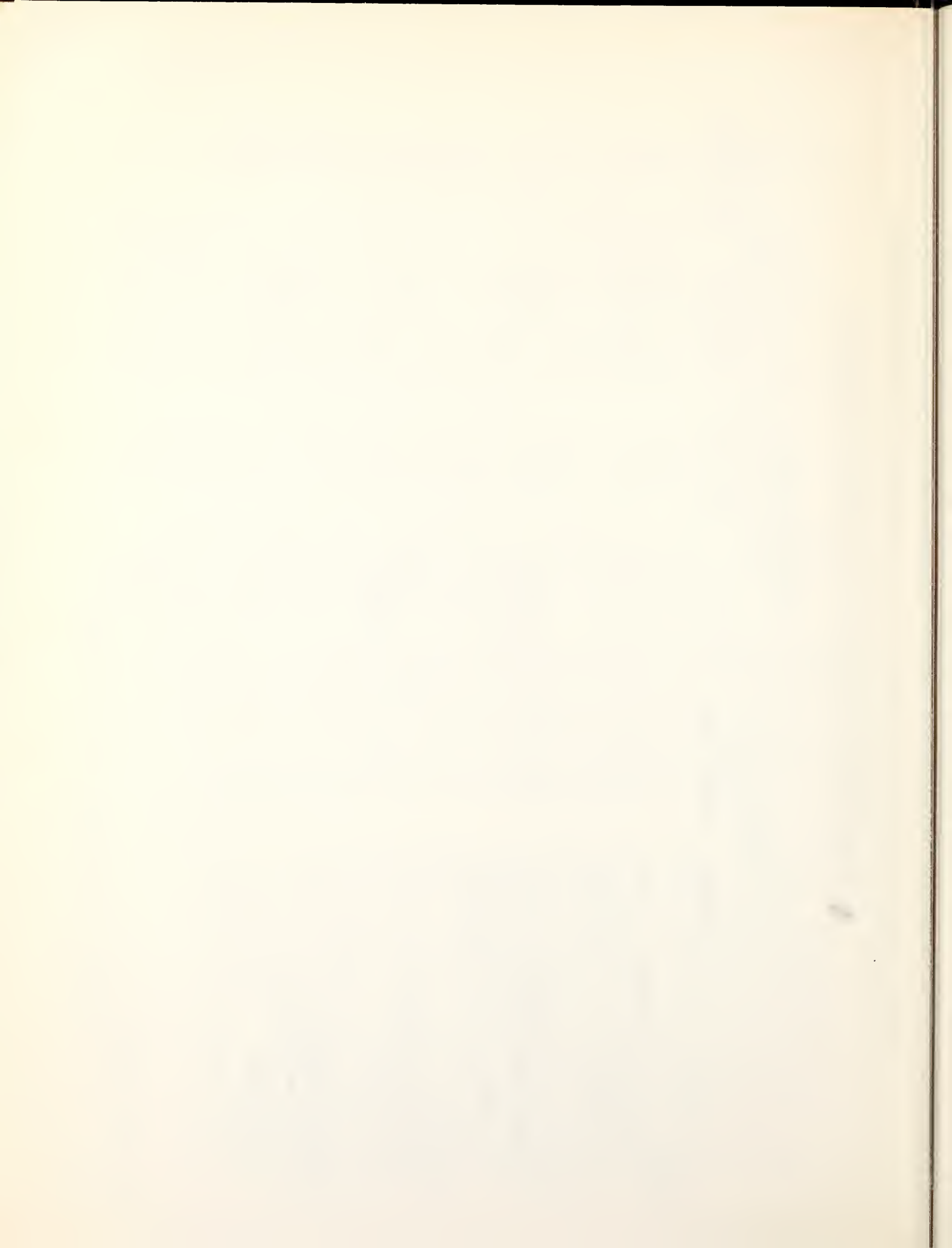
OF MAJOR TYPES OF PROPERTY AND LIABILITY INSURERS

Type	Premiums Written			
	1954		1964	
	\$ Millions	Percent of Total Volume	\$ Millions	Percent of Total Volume
<u>Stock</u>				
Miscellaneous Liability	\$ 461,295	6.5%	\$ 874,335	6.9%
Total Volume	7,143,593	-	12,647,613	-
				7.8%
<u>Mutual</u>				
Miscellaneous Liability	110,427	4.8	236,423	5.0
Total Volume	2,278,133	-	4,766,940	-
				4.1
<u>Reciprocal</u>				
Miscellaneous Liability	-	-	NA	-
Total Volume	-	-	668,091	-
				2.6
<u>Lloyds Association</u>				
Miscellaneous Liability	-	-	NA	-
Total Volume	-	-	23,987	-
				NA
				25,473
				-

Exhibit B-2

NA = Not Available

Source: Best's Aggregates and Averages, Property-Liability.



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PRODUCERS OF COMMERCIAL INSURANCE

Insurance producers bring the insurance buyer and the insurance company together. As the sales arm of the industry, they help the insurance buyer identify his needs and then they convince the underwriter to assume the risk for a reasonable premium. Most producers are compensated by a commission (a percentage of the premium that will vary according to premium volume). Product liability commission levels are typically equal to the commission levels for other miscellaneous liability coverages. Best's Aggregates and Averages indicates the average commission levels ranged from a high of 14 percent in 1971 to a low of 11.9 percent in 1975.

There are three types of producers: (1) independent agents and brokers, who attempt to place the insured's business with any of a number of companies with which they do business; (2) exclusive agents and insurance company employees, who place insurance with only one insurer and produce business that their companies want to write; and (3) surplus lines brokers, who are licensed to do business with insurers that are not admitted or licensed in the state. According to A.M. Best Company, Inc., which is the primary source of industry performance statistics, over 85 percent of the miscellaneous liability written in the United States in 1975 was produced by independent agents and brokers.

Customarily, independent agents and brokers have little trouble renewing all of an account's coverages with the present insurer even though some coverages may have been unprofitable for the insurer. The reason is that they encourage the underwriter to view the account as a whole and to consider all of its positive characteristics. Since most agents and brokers are usually as expert in insurance matters as the underwriters themselves, they are effective in this role. Further, since they are in constant contact with many different insurers, they are well aware of market conditions, current premium levels, and overall insurer receptivity to a given exposure or group of exposures.

If agents and brokers find that the premium level on the expiring policy is above the current market level or the renewal quotation is too high, they try to secure a more realistic quotation from the current insurer or from other insurers. If they do not seek lower premium rates, they may lose their insurance buyers to another broker or agent. In short, a lower commission is better than none at all.

If the producer's client has experienced large or frequent losses or if insurers regard the exposure as hazardous, the producer may be unable to secure a premium quotation that the insurance buyer considers realistic. In rare cases, the producer may find that none of his regular insurers is even willing to offer a quotation. In these cases, he may turn to a surplus lines broker.* This broker functions as a "broker's broker" and has access to companies that are not licensed to conduct a regular insurance business in the producer's state. Many of these producers are talented specialists, familiar with the handling of difficult risks. These companies are often willing to write coverages and exposures that the more traditional insurance carriers do not want. Before allowing this step, some states require the originating broker to present declination letters showing that the licensed insurers have refused the risk. If the nonadmitted company offers a quotation acceptable to the insurance buyer, the surplus lines broker will share his commission with the original producer. (Insurance can also be placed directly with surplus lines brokers or, in some cases, directly with the nonadmitted companies themselves.)

As a rule, most producers provide this range of marketing service for their clients. In addition, some of the larger producers (those generating over \$5 million in annual premium) supply other services as well - for example:

- ¶ Loss control engineers, who survey the clients' premises; review safety management practices and the loss control recommendations made by the clients' insurers and advise the clients on how to implement these recommendations
- ¶ Claims review and statistical reporting assistance
- ¶ Assistance in developing and managing captive insurance companies.

As the larger producers continue the 10-year trend of aggressively acquiring smaller producers, this broader scope of services is becoming available to more policyholders.

* - Note: Some producers, particularly the larger ones, are also licensed as surplus lines brokers.

REGULATION OF COMMERCIAL INSURANCE

Insurance companies, as well as agents and brokers, are regulated by the states rather than the Federal Government. Each state has its own minimum capital requirements, which a company must meet to be admitted or licensed to do business in the state. Although all of the states permit business to be placed with nonadmitted companies, they generally seek to limit the amount of such business by regulating surplus lines brokers in accordance with their surplus lines laws.

State insurance regulators are concerned with protecting the interests of policyholders. To this end, they monitor the financial condition of companies operating in the state; enforce rules on noncancellation and nonrenewal of policies, improper handling of claims, and the like; and regulate rates and rate revisions, evaluating them against the general statutory criteria of being adequate but not excessive and not unfairly discriminatory. Approximately 70 percent of the states are prior approval states - i.e., they require that rates be submitted to the State Insurance Department for approval prior to their use. The remaining states are open competition states, requiring only the documentation and supporting data used in developing the rate.

In commercial insurance, the role of the state regulators is less extensive than it is in personal lines insurance for two reasons:

- ¶ First, commercial policyholders usually do not need the same degree of protection as small policyholders to ensure that they receive fair treatment from insurers.
- ¶ Second, since commercial insurers underwrite a wide variety of exposures, they must be relatively free to develop sound premiums. To accommodate this practical reality, most state regulators permit insurers to apply special or supplementary rating rules and charge rates based on their own judgment.

Although regulators are concerned about the problem of availability of insurance, they are generally not empowered to force insurance companies to accept business they do not want except in certain areas specified by state laws (e.g., private passenger automobile assigned risk plans).

C - THE UNDERWRITING OF

PRODUCT LIABILITY INSURANCE

Product liability insurance is provided in two broad types of policies - primary policies and excess policies. To spread their risk in underwriting this coverage, insurers use a device called reinsurance. They also bring to bear the collective judgment of their most experienced underwriters in deciding which product liability exposures to accept. This section describes the types of policies and risk selection practices used in underwriting product liability insurance.

PRIMARY POLICIES

Most purchasers of liability insurance buy their coverage in several layers. The first or bottom layer is called the "primary" layer. It limits the insured's liability to specified amounts. For each type of liability coverage, basic, or minimum, per occurrence limits have been established. For product liability these basic limits are \$25,000 per occurrence for all bodily injury damages, including loss of services, sustained by one or more persons, and \$5,000 per occurrence for property damage. In addition, for certain liability coverages, these per occurrence limits are supplemented by annual aggregate limits. For product liability, these aggregate limits are \$50,000 for bodily injury and \$25,000 for all property damage. Aggregate limits are the total amount for which the insured is liable regardless of the number of occurrences. They apply separately to each annual period covered by the policy.

Most insurance buyers purchase more than basic limits. Generally, the aggregate limit of liability for primary coverage, exclusive of legal defense costs, is in the range of \$250,000 to \$1 million; our underwriting file review indicates that the most frequent limit purchased is \$500,000. The per occurrence limit - i. e., the amount payable for any given occurrence - is usually less than or equal to the aggregate limit. Limits can also be purchased on a basis that combines bodily injury and property damage limits into one overall per occurrence limit to which one aggregate limit applies. This approach is referred to as "combined single limit."

The types of primary policies available and special coverage features and modifications are noted below.

Types of Primary Policies

Primary policies subdivide into two types:

1. Comprehensive General Liability Policies (CGL) provide coverage for a variety of exposures, including premises operations, independent contractors, commercial automobile, and products, which includes completed operations. The CGL policy can include more than 26 coverage parts; however, it does not cover damage to property owned by the policyholder. Of the 3,000 underwriting files we reviewed, 52 percent of all primary policies providing product liability coverage were CGL policies.
2. Package policies provide property coverage as well as the coverage provided by CGL policies (except for automobiles owned by the insured). They are intended for the smaller company. Our underwriting file review showed that 48 percent were package policies; of these, 85 percent were relatively small companies (1975 sales volume less than \$2.5 million).

Coverage Features

Under the terms of both the Comprehensive General Liability policy and the typical package policy, the insurer agrees to pay on behalf of the policyholder or insured all sums that he will become legally obligated to pay as damages arising out of an occurrence or loss event causing bodily injury or property damage. Although this promise to pay is subject to a variety of qualifying statements, they do not blunt the policy's main intent: The insurer will pay damages or settlements up to the limit of liability in the policy. Defense costs are paid in addition to the limit of liability.

For product coverage, the underwriter agrees to pay damages and defend the policyholder for injuries occurring within the policy period from all products - both new and existing - manufactured, sold, handled, or distributed. It is important to note that it does not matter when the product was manufactured or sold, or whether it existed at the time the insurer underwrote the policy. Because of the potential accumulation of liability over time, this coverage feature has been cited as the cause of severe problems,

especially for the insurers of manufacturers of durable goods. The underwriter is faced with the possibility that any one of the insured's existing products, including products manufactured over 20 years ago, could cause a loss under the current policy. The reason is that, in most jurisdictions, the statute of limitations begins to run at the time of the injury rather than at the time the product was manufactured or sold. This is not true in several jurisdictions. One of the exceptions is Connecticut, which in mid-1976 enacted a statute of limitations that commences at the time a product enters the stream of commerce and runs for 8 years.

Another coverage feature is that any incident that occurs during the policy period is covered regardless of when the claim is reported to the company. The potential lag between the occurrence and the report could lead to significant pricing problems as the underwriter's statistics could appear to be far better than they actually are. However, from our interviews with insurance company claim personnel, we learned that the time lag between the injury and the claim is relatively short for most products - i. e., within 1 or 2 years.*

Coverage Modifications

Our review indicates that actual coverage provisions for product liability vary little from company to company. We noted only two exceptions. First, an insurer may choose to exclude certain products from coverage; our underwriting file analysis disclosed four such examples, but, in three of them, separate policies had been written to cover the excluded products. The second modification is an endorsement to the policy - i. e., an appended change in the conditions of the policy contract - that imposes a deductible; less than 3 percent of the primary files we surveyed had deductibles. The amounts were distributed as follows.

	Per Occurrence Deductibles				
	0-\$1,000	\$1,000-\$9,999	\$10,000-\$25,000	Over \$25,000	Total
Small companies (\$2.5 million sales or less)	40 %	2%	-	-	42%
Large companies (over \$2.5 mil- lion sales)	19	5	3%	31%	58

* - Data should be available from the ISO from its "closed-claim study."

Of these deductibles, less than 1 percent applied to products coverage only; in other words, over 99 percent applied to the entire liability policy. And almost 99 percent applied to both bodily injury and property damage.

Other modifications mentioned in our interviews were the provision of coverage for only those product lines in existence at the inception of the policy and the inclusion of defense costs within the limit of liability. According to the insurers we spoke with, the infrequent use of coverage modifications is explained by the fact that most insureds find them unacceptable and seek a more willing market.

EXCESS POLICIES

All coverages purchased to pay for losses above the limits of liability specified in the primary policy are referred to as excess policies. These policies take over when a large loss occurs that exhausts or exceeds the limits of the primary policy. They are used extensively for liability coverages, where the maximum potential loss is considerably greater than for property. In fact, for many coverages included in the typical CGL policy, there is no annual aggregate limit of liability for bodily injury. Since liability awards are not limited to a specified amount, an insurer can experience several "total limit" losses in any one policy year and therefore would incur considerable risk with a very high coverage ceiling.

Policyholders desiring higher limits of liability than the primary insurer is willing to offer, purchase the additional layers in the form of an "umbrella" policy or an excess policy. Both contracts provide the same basic products coverage as the primary policy but assume liability for losses only after the limits in the primary policy (either CGL or package) have been exceeded or exhausted. In addition, the umbrella policy contains a broader coverage clause and fewer exclusions than the primary CGL policy (e.g., umbrellas automatically provide worldwide coverage and coverage for damage to property in the care, custody, and control of the insured). Usually, these extensions of coverage are subject to a deductible provision of a modest amount, referred to as a "self-insured retention" (SIR). The SIR often varies with the size of the insured's exposure. Smaller insureds have SIRs of \$10,000 to \$25,000 per occurrence.

Of the excess policies we reviewed, 45 percent were purchased by small companies and 55 percent by large. The larger policyholders, and policyholders manufacturing products with substantial loss potential, often purchase

several excess layers up to \$100 million or more. As we learned in our interviews, this layering is needed since insurers rarely wish to write more than \$5 million to \$10 million on any one policy. And since manufacturers of high-hazard products often need 5 to 10 times that amount, they use any number of companies to "fill out the line." In fact, 15 or more may be involved in the liability insurance program for a single policyholder. (In contrast, large property risks, which have a definitive loss potential, are usually handled by one or two insurers. Since these insurers do not expect more than one loss, they write a policy for the full amount at risk.) For the producer handling a multilayered client, the job is extremely complex. Not only must he find underwriters willing to write the excess layers, but he must try to get a uniform approach to pricing.

Another market for excess policies is the large company with a risk-retention program (loosely referred to as self-insurance). Such a company sometimes purchases excess policies to cover risk beyond the threshold established for its internal program. Because of the problems in controlling claims handling for the retained portion of the risk, most insurance companies will not write excess policies in such situations. Others will accept this business only if it is coupled with a satisfactory arrangement for professional claims handling.

REINSURANCE

Reinsurance is insurance purchased by an insurance company to transfer a portion of its liability to other insurers. The policyholder has no part in the reinsurance transaction and usually no knowledge of it. If the policyholder has a loss, the insurer that issued the policy pays the claim and looks to the reinsurer for recovery of the portion the reinsurer has agreed to pay.

Usually, reinsurance companies write only risks that the originating company is also willing to write and has the ability to service. Thus, reinsurers help the original insurer "spread its risks" and avoid large losses that could upset the company's financial stability. They also augment the insurer's capacity. Their risk capital enables insurers to offer policyholders much higher limits of liability than their own surplus would allow.

Liability insurers use two types of reinsurance on their portion of the policyholder's insurance program - facultative and treaty. Facultative reinsurance is written on a risk-by-risk basis - i. e., each risk is individually reinsured under a specific agreement. Treaty reinsurance provides for the automatic transfer of a portion of the insured's business to other insurers

under a prearranged agreement; it usually covers all risks within a line of business. To illustrate:

- ¶ If a company writes \$5 million, it probably reinsures 80 to 90 percent of this amount under its liability treaty.
- ¶ If some of the exposures are excluded from the treaty - e. g. , organic chemicals - the company will arrange facultative reinsurance for the portion in excess of its own capacity. Five percent of the underwriting files we reviewed had been reinsured on a facultative basis. Of these, 89 percent were manufacturers and 70 percent were large companies.

Occasionally insurers purchase a contract from these reinsurers which permits an insurer to reinsure an individual risk solely at its option at pre-determined rates. These hybrid agreements are referred to as "facultative treaties." They are not common.

RISK SELECTION METHODS

The insurance underwriter decides which exposures his company is willing to insure. To help him make this decision, he uses guidelines contained in underwriting manuals. These guidelines reflect the collective judgment of the company's most experienced underwriters.

The decision to accept or decline the risk is usually made routinely at the local level, within one of the insurer's branch or field offices. The agent generally gathers the initial risk facts relating to the types of insurance requested by the potential policyholder and submits them to his local field underwriter. Since product liability insurance is written along with other liability and, in some cases, property coverages, the underwriters assess the desirability of the risk from many different points of view. For example:

- ¶ The exposures to loss in the insured's operations
- ¶ The loss control or safety measures practiced by the prospective policyholder
- ¶ The risk facts - prior losses, financial stability, construction of buildings, etc.

¶ The limits and coverages requested

¶ The fit of the risk with the profile in the underwriting guidelines.

Since most risks present the underwriter with a variety of potential losses, the underwriter weighs the pros and cons of each risk. He may consider ordering an inspection report and information concerning the prospect's financial resources. According to our review of underwriting files, special product liability inspection reports are not ordered unless the underwriters regard the apparent hazards as unusual.

The risks that present the greatest loss potential are often referred to senior underwriters in the insurer's regional or home office in accordance with referral and underwriting authority guidelines. These guidelines specify the underwriting information to be included with the submission - e.g., inspection reports, product brochures, annual statements, catalogues, advertising copy. The criteria for referring a risk upward customarily have to do with premium size, limits of liability, types of rating or premium determination plans, and hazardous exposures. The actual thresholds for each of these referral criteria vary from company to company. For example, some companies require that the underwriter refer to the home office all risks that contain any liability exposure on products for which a statistically derived rate has not been published in the Insurance Services Office Manual. Other companies permit their field underwriters to make the final decision in product categories where only judgmental guidelines are available.

Most insurance companies publish guidelines that identify certain product categories where extraordinary caution is required or where the company will not normally provide coverage. Typically included are:

(1) aircraft products (usually prohibited because they are excluded in reinsurance treaties and a rather well-organized specialized insurance market exists); (2) pharmaceuticals and drugs; (3) certain industrial machinery and equipment; (4) organic chemicals; (5) medical devices; (6) explosives or ammunition; and (7) other products that are capable of causing major claims when put to their ultimate use as components or by themselves - e.g., motors, hoists, generators, electrical control equipment.

In his consideration of the risk facts, one of the most important underwriting tasks is to determine whether the ultimate end use of the insured's product does, in fact, present a severe hazard. For some product categories, such as appliances and tools, the actual risk may vary dramatically

with the product's use. For example, a bolt used exclusively in wooden furniture is far less hazardous than one used in industrial machinery. The inability to predict the number or severity of injuries that are likely to occur to persons or property damaged by the insured's products is, according to most insurers, a major obstacle to underwriting decisions. Because written manuals can provide little actual guidance, the underwriter must diligently review previous loss experience on the risk along with reports provided by the insurer's loss control or loss prevention department.

Our findings show that few, if any, of these decisions to write or decline a risk are "automatic" responses. The decision on any one submission usually results from balancing many factors. And since product liability insurance is rarely written alone, our interviews indicate that the underwriter may be influenced by some intangible aspects of the risk submission such as the desirability of the other coverages, the size of the account, the number of years the company has had the account, and the overall record of the producer or insurance agent with the insurance carrier.

D - HOW PRODUCT LIABILITY

PREMIUMS ARE DETERMINED

Premiums charged for product liability coverages are determined by using either of two types of rating plans. The first type is a prospective or guaranteed cost plan; the second is a retrospective plan, which is designed to take into account the actual losses incurred during the policy period in calculating the final premium to be charged. Although 90 percent of the cases in our underwriting file review were rated prospectively, these rating plans probably account for much more than 10 percent of product liability premiums since the very large accounts are generally written on a retrospective basis.

There are three distinct ways in which final rates used in determining product liability premiums are developed: The traditional method, which begins with a specific rate for an individual product's "basic limits" coverage and then may apply various modifications to develop a final rate. The composite rating method, which begins with the same individual product basic limits rates, but then combines these with rates for all other coverages offered so that the final rate charged is an aggregate rate for the total policy. The loss rating method, which begins, not with the product basic limits rates, but with an overall estimate of expected losses and expenses and develops a final rate applicable to the entire policy. In the second and third methods, there is no final rate or premium which applies specifically to product liability coverage.

In this section, we describe how these rating methods and plans are used to determine premiums for primary coverage and then how premiums for excess policies are determined. Then we discuss the process of determining the basic limits rates that are key elements in the traditional and composite rating methods. Next we discuss how changes that have been made in the industry's data collection procedures will affect the determination of these rates in the future. Finally, we describe situations in which various combinations of coverages and rating methods and plans are most frequently used.

D.1 - METHODS OF DEVELOPING

FINAL RATES

TRADITIONAL METHOD

In the traditional method of determining product liability rates the calculation begins with the selection of the appropriate "basic limits" rate or rates for the class or classes of products to be covered. Later in this section, we will describe how these rates are developed. The term "basic limits" is used to indicate that these rates reflect a standard limit of liability (per occurrence limits of \$25,000 and \$5,000 for bodily injury and property damage, respectively, and annual aggregates of \$50,000 for bodily injury and \$25,000 for property damage). If higher limits are desired, these rates must be increased through the use of "increased limits factors" which correspond to the limits desired.

The rate is then usually modified in two additional ways: (1) to reflect the overall liability experience of the policyholder during the prior 3 to 5 years in comparison with the expected experience (referred to as the "experience modification"); and (2) by a series of subjective credits or debits that reflect the quality of the insured's overall operation (referred to as the "schedule modification"). Since these two modifications can have a significant impact on the premium, they are discussed in more detail below. Further, if coverage is provided as part of a package policy, a discount may be applied to the premium. This discount, which generally ranges from 5 to 20 percent, is intended to reflect the insurer's expense savings arising from the replacement of several policies with one master policy. After the final rate is determined, it is multiplied by some measure of exposure, usually sales volume, to determine the premium applicable to the product liability coverage. (See Exhibit D-1 for an illustration.)

Experience Modification

The purpose of an experience rating plan is to reflect the insured's own loss experience in the determination of the premium. As rates are based on "averages," it follows that these rates may be too high for some risks and too low for others. These plans limit the amount of any one loss included in the calculations to mitigate the effect of a "shock loss." Thus, these plans are far more sensitive to loss frequency than loss severity.

SAMPLE WORKSHEET FOR

DEVELOPING A COMPREHENSIVE GENERAL LIABILITY POLICY PREMIUM

USING THE TRADITIONAL RATING METHOD

Description Of Hazards	Code No.	Premium Basis	Basic Limits Rate		Increased Limits Factor		Rate Modification		Final Rate		Advanced Premiums	
			B. I.	P. D.	Bodily Injury	Property Damage	Experience Mod	Scheduled Mod	B. I.	P. D.	Bodily Injury	Property Damage
Premises Operations											\$5,432	\$1,583
Independent Contractors											467	234
Completed Operations											150	75
Products Automobile Parts Mfg - Not Operating Parts	37105	\$1,000,000 (Sales)	.39	.16	4.52	5.50	1.0769	1.10	2.088	1.043	2,088	1,043
Total Advance B. I. and P. D. Premiums											\$8,137	\$2,935
1. Owned automobile - premium basis - per auto												
2. Hired automobile - premium basis - cost of hire												
3. Non-owned automobile - premium basis - No. of employees												
Total Automobile Advance B. I. and P. D. Premiums											2,542	854
Total Policy Advance B. I. and P. D. Premiums											\$2,932	\$ 991
											\$11,069	\$3,926

STEPS IN DEVELOPING THE PRODUCT HAZARD PREMIUM

Step 1: Determine the most appropriate product classification

Step 2: Use classification code number to determine basic limits rate from manual or develop rate if classification has an (a) rate

Step 3: Determine increased limits factors from Iso tables in manual (factors used in example are for B. I. \$1,000,000/1,000,000 and P. D. \$500,000/500,000. Basic limits rates are for B. I. limits of \$25,000 per occurrence, \$50,000 aggregate and P. D. limits of \$5,000 per occurrence, \$25,000 for all damages)

Step 4: Apply rate modifications determined in accordance with experience and schedule rating plans. Note: Experience rating plans differ from company to company. Hence, final rates for the same exposure could differ.

Step 5: Determine from the policyholder the number of exposure units to be multiplied by the final rate. The premium bases most frequently used for products liability coverage are: (1) receipts (the rate applies per \$1,000 of receipts), (2) sales (rates are applied per \$1,000 of sales) and; (3) units (number of products manufactured)

Experience modifications are used only if the exposure is of sufficient magnitude for the past loss experience to have some credibility. Although experience rating plans vary among insurance companies, generally if the Comprehensive General Liability premium at basic limits exceeds the company's threshold for experience rating, which is usually \$1,000 to \$2,500 in annual premiums, an experience modification will be calculated as shown in Exhibits D-2 and D-3. The product liability premium, through this process, is affected by the liability experience on the insured's entire policy - not just the product liability losses. Thus, the premium charged is based, in part, on actual as well as anticipated experience.

Schedule Modification

Schedule modification plans are used to further raise or lower the premium level based on less tangible risk characteristics. Underwriters we surveyed indicated that schedule modifications were most often used on CGL policies without product coverage to lower the premium to a more "competitive" level. Most underwriters indicated that, although this practice is not usually followed for policies containing product coverage at present, it may have been applied during intensely competitive periods in the past. The standards used for applying a schedule modification are highly judgmental. And while many underwriting files contain justification for their use on an individual risk, underwriters have indicated that it is entirely possible that two underwriters could come to different conclusions as to the need for or amount of schedule modification. These plans vary among companies but typically permit credits and debits generally ranging from 5 to 25 percent. Typical plans reflect nonratable risk characteristics such as managerial cooperation with the insurer; employee training; selection and motivation of employees; the condition of the insured's equipment, steps that the insured has taken or has failed to take to prevent losses; and other factors such as product quality assurance programs, which are often verified by the insurer's loss control engineers and documented by the underwriter in his rating file.

COMPOSITE RATING METHOD

Composite rating procedures vary among companies, but most often they begin with the determination of "basic limits" rates in the manner previously described to arrive at a premium figure for the entire policy, including the products hazard, and then divide this premium by one overall measure of exposure - usually sales or payroll - to determine the

SAMPLE EXPERIENCE RATING PLAN*STEP 1

$$\frac{\text{Losses}^1 \text{ incurred in 3- to 5-year period plus loss adjustment expenses} \times \text{Loss trend and development factors}^2}{\text{Basic limits premium over 3- to 5-year period}^3} = \text{Actual policy loss ratio}$$

STEP 2

$$\text{Experience modification} = \frac{\text{Actual policy loss ratio} - \text{expected loss ratio}}{\text{Expected loss ratio}^4}$$

STEP 3

$$\text{Experience modification} \times \text{Credibility}^5 \text{ factor} = \text{Final experience modification}$$

STEP 4

$$\text{Modification} \times \text{Basic rate} = \text{Final rate}$$

(Please refer to Exhibit D-1 to see how the modification affects the final rate)

* - Note: Plans vary somewhat among insurers.

-
- 1 - Losses = Losses paid on behalf of the insured or incurred by the insured under a comprehensive general liability policy (products and operation losses). Individual losses are often limited to an amount related to premium size to reduce the effect of large losses.
 - 2 - Trend and development factors = Loss estimates (reserves) are increased to reflect the fact that inflation and other forces will increase the ultimate loss payouts.
 - 3 - Experience period = Losses included in the calculation can usually reflect the previous 3 to 5 years.
 - 4 - Expected loss ratio = That percentage of the premium allocated to pay losses. It is determined by subtracting the expense ratio from 100 percent. It is also known as the "permissible" loss ratio.
 - 5 - Credibility factor = Actuarial estimate of the reliability of the insured's losses to predict its actual loss-producing potential - i.e., large policyholders have more credibility than small ones.

Example: Assume an actual loss ratio of 70 percent and an expected loss ratio of 65 percent. The rate modification produced would be a debit of 7.69 percent, if full credibility is assumed. In most plans, the premium would have to exceed \$75,000 to approach full credibility.

$$\begin{aligned}\text{Experience modification*} &= \frac{70\% - 65\%}{65\%} + 100\% \\ &= 7.69\% + 100\% \\ &= 107.69\%\end{aligned}$$

-
- * - If greater than 100 percent, the experience modification is a debit and raises the rate level. If less than 100 percent, the modification is a credit and represents a rate reduction.

EXAMPLE APPLICATION OF
TYPICAL EXPERIENCE RATING PLAN

<u>Model Steps</u>	<u>Example</u>
<u>STEP I: Calculate Actual Policy Loss Ratio</u>	
A. Total basic limits premium (without rate modifications) for experience period	\$10,000
B. Determine ratable losses	
1. Determine basic limits losses	\$3,000
- Losses to be included cannot exceed the basic limits - e. g., \$25,000 BI and \$5,000 paid per occurrence; \$50,000 BI and \$25,000 paid in the aggregate	
- The amount of any single loss to be included cannot exceed the maximum single loss amount specified in the "maximum single loss" table. Note: This amount varies with premium size and among insurers - e. g., the maximum single loss for \$10,000 premium may be \$5,000	
2. Determine allocated loss expense	<u>500</u>
3. Add basic limit loss and allocated loss expense to determine ratable losses	3,500
C. Divide total ratable losses by total basic limits premium to determine actual policy loss ratio	$0.35 = \frac{3,500}{10,000}$ <u>or 35%</u>

Note: Example assumes ratable losses have been adjusted to reflect loss development and trend.

Model Steps	Example
<u>STEP II: Determine Experience Debit or Credit</u> Subtract expected loss ratio (from experience rating plan) from actual loss ratio and divide by expected loss ratio to determine experience debit or credit. Note: If result is negative, policy experience has produced a credit - i.e., experience was better than expected	$(0.30) = \frac{0.35 - 0.50}{0.50}$
<u>STEP III: Determine Final Experience Rating Modification</u> A. Multiply experience credit or debit by the credibility factor (from experience rating plan - factor varies with premium size) to determine adjusted experience credit or debit. In example, \$10,000 premium could be considered 29 percent "credible" B. Add adjusted experience credit or debit to 1.00 to determine final experience rating modification	$(0.087) = (0.30) \times 0.29$ (Adjusted experience credit) (Experience credit) (Credibility factor) $0.913 = (0.087) + 1.00$ (Final experience rating modification) (Adjusted experience credit)

Note: Refer to Exhibit 4-1 to see how final experience rating modification affects the liability premium.

composite rate for the policy. The advantages of this system are said to be twofold. First, from a marketing point of view, only the final composite rates are known, making it difficult for competitors to determine what factors were used to develop them. Thus, it is theoretically more difficult for competitors to bid on accounts written in this manner. Second, since the advance premium paid at the beginning of the policy year is only a provisional premium (advance premium is based on estimated exposures - sales or payroll - and the final premium is based on the actual figures), the use of a composite rate facilitates the final determination of the policy premium for all risks. This is done by allowing the underwriter to apply one rate, the composite rate, to the actual exposures which are determined by the premium auditor from the insured's records at the end of the policy term.

The disadvantage of this method from a ratemaking point of view is that the underlying rates that apply to the individual coverages in the policy are not preserved or made available for statistical purposes. Hence, no actual rate or premium for product liability coverage is available from policies rated by this method.

LOSS RATING METHOD

Loss rating techniques also vary among insurers, but the concept involves dividing the expected losses and expenses by some measure of exposure such as sales, number of units produced, payroll, miles driven, number of employees, etc., to determine how much to charge per unit of exposure. At the end of the policy term, the number of these "exposure units" is determined by audit and a premium adjustment is made. An estimated premium is billed at the inception of the policy term. This approach to rate development is usually used only for insureds the underwriter feels have "full credibility" - i.e., when the losses incurred by the insured provide a sound estimate of all the losses to be expected from this type of risk. This size account is said to be "self-rating." There is no agreement among insurers regarding how large an account must be before it becomes self-rating. However, according to Rule 9 of ISO's Composite Rating Plan, loss rating may be used if the policy develops at least \$200,000 of losses during a period of 3 years at specified limits. For ratemaking purposes, this approach has the same disadvantage as does composite rating - the individual rates and premiums applicable to product liability coverage are not available.

D.2 - PROSPECTIVE AND RETROSPECTIVE RATING PLANS

The term "prospective" rating refers to the fact that the premium charged by the underwriter is calculated at the beginning of the policy term and is not changed to respond to the actual losses incurred during the policy period (although it will vary if the units of exposure - i.e., sales volume - change during the year). With very few exceptions, the traditional method of determining final rates is used in prospective rating plans.

Retrospective (retro) rating plans, unlike prospective rating plans, provide for the adjustment of the current policy premium to reflect the losses incurred during the policy term. Under this rating procedure, the insured does not know his actual premium until well after the close of the policy year. In fact, some plans are kept "open" by the underwriter for certain "long-tail" risks for 5 years or more. Composite and loss rating methods are frequently used in determining rates used in retro plans.

In most retro plans, the premium is capped by a predetermined maximum. That is, at the beginning of the policy term, the insurer and policyholder will agree upon a minimum and a maximum premium, as well as all the factors and coverages to be included. An additional feature of retro plans is the use of a "loss limitation" factor, which specifies the maximum amount of any one loss to be included in the retro formula. Exhibit D-4 illustrates the retro formula.

Many larger policyholders write all of their liability insurance on a retrospective rating plan referred to as "Plan D." This plan permits the inclusion of all casualty coverage (e.g., automobile, worker's compensation, and general liability, including product liability).

Most "tough" product risks for large insureds are written on a retrospective rating basis. This arrangement permits a high degree of flexibility because the key factors that determine the final premium are negotiable. For example, a retro plan can be designed to permit the insured to pay a high proportion of his losses. This can be accomplished by eliminating the loss limitation and eliminating the maximum cap on the retro premium or setting it at a very high level. The plan can simultaneously be used to give the insured a greater incentive to produce safe products by specifying a low premium level that will apply if the loss experience is favorable. The variations in between are limited only by the imagination of the contracting parties and their willingness to negotiate.

THE RETROSPECTIVE RATING FORMULA*

$$RP = [(SP \times BF) + (LCF \times IL) + PC] TM) - DIV$$

Where:

- RP = Retrospective Premium payable for the year or years agreed upon, subject usually to a minimum (e. g., .65) or a maximum (e. g., 1.75) of the standard premium
- SP = Standard Premium (dollars), the premium determined on a prospective guaranteed cost basis, including the experience rating modification
- BF = Basic Factor, a negotiated factor applied to the standard premium to determine how much the insurer will use to cover fixed costs in handling the account - e. g., broker commission, etc.
- LCF = Loss Conversion Factor, designed to cover the insurer's variable loss experience - e. g., claim adjustment expenses
- IL = Incurred Losses paid and reserved for all liability claims, including product liability for limits subject to the plan
- PC = Premium charge; the losses to be included in the IL component can be limited to \$10,000, \$25,000, \$150,000, or some agreed-upon amount. Losses above this threshold are "insured" and the premium charge is for this excess coverage. It is determined by multiplying the Standard Premium by an "excess loss premium factor." This premium is often included in the basic premium charge
- TM = Tax Multiplier, to make provision for state premium taxes
- DIV = Dividend, a return premium, reflecting a participation by the policyholder in the insurer's overall earnings. Dividends are only included on "participation" type retrospective rating plans

* - This model reflects the features of a "Plan D" retro. These plans permit the inclusion of all casualty coverages - e. g., Worker's Compensation, commercial automobile, and general liability.

APPLICATION OF A
NONPARTICIPATING PLAN "D"
RETROSPECTIVE RATING PLAN

	Model Steps	Example
STEP 1	<u>Determine the Standard Premium</u> This retro formula component is developed just as it would be under a "guaranteed cost" (prospective) rating plan for the included coverages, e.g., worker's compensation, automobile, general liability (including products)	\$500,000 (Standard Premium)
STEP 2	<u>Apply the Basic Factor</u> This factor reflects the insurer's overhead e.g., producer commission (e.g., 10 percent) and a profit factor (e.g., 5 percent). This factor is assumed to be 20 percent for the example	$\$500,000 \times 0.20 = \$100,000$ (Standard premium) (Basic factor) (Basic pre-mium charge)
STEP 3	<u>Determine Losses and Apply Loss Conversion Factor (LCF):</u> The losses incurred during the policy term are multiplied by this factor. The factor, 14 percent in the example, reflects the variable costs associated with handling the losses. The losses are valued at various periods following the expiration of the policy. A typical retro plan will require valuation at 18 months, 24 months and 36 months after the inception of the policy term. This time period is required for the losses to develop their ultimate value.	$100,000 \times 1.14 = 114,000$ $250,000 \times 1.14 = 285,000$ $300,000 \times 1.14 = 342,000$ (Incurred Losses) x (LCF) = (Converted Losses)

Model Steps	Example
The individual incurred losses may be limited to a prearranged amount - e. g., \$10,000 ot \$25,000. Losses above this point are insured on an excess-of-loss basis for a premium	
STEP 4 <u>Determine the Premium Charge and Excess Loss Premium Factor</u>	\$500,000 x 0.06 = \$30,000 (Standard x (Excess = (Premium premium) pre- charge)* mium factor)
The premium charge is the cost of insurance above the loss limitation. It reflects the expected cost of losses above this point. This charge is assumed to be 6 percent in this example, and it is applied to the Standard Premium	
STEP 5 <u>Apply the Tax Multiplier</u>	\$100,000 + \$342,000 + \$30,000 = \$472,000
This factor reflects the State Premium tax. It is applied to the entire retro premium, Steps 2 to 4. It is 3 percent in this example	(Basic (Converted (Pre- charge) losses) mium charge) \$472,000 x 1.03 = \$486,160** (Tax ("Retro" multi- premium) plier)

* - Source: Insurance Services Office - Casualty Individual Risk Rating Plans.
p. 46

** - The retro premium could be limited to a predetermined minimum of, say, 65 percent of the standard premium (\$350,000 in the example) or a maximum of, say, 1.75 percent (\$875,000). These factors are negotiated along with the others at the outset of the policy term.

D.3 - DETERMINING EXCESS POLICY PREMIUM

Umbrella and form-following excess policy premiums are determined by multiplying a factor times the underlying, or primary, policy premium. These factors vary from 10 to 50 percent of the primary premium or higher, depending upon the excess underwriter's judgment concerning the probability that he will be required to pay a loss. Umbrella underwriters charge additional loadings for the coverage extensions provided in those policies. Because excess policies are used to insure infrequent catastrophies, excess underwriters, like reinsurers, price their policies to reflect the fact that they expect to pay very few losses. They try to achieve this by requiring substantial underlying or primary limits as a condition to writing coverage. When this is not practical and excess coverage is written over relatively low primary limits of liability (a layer sometimes referred to as "working excess"), the underwriter will often use a loss rating approach to develop the excess premium.

D. 4 - ESTABLISHING "BASIC LIMITS" RATES

Determining the appropriate basic limits rates for product liability exposures involves some difficult problems of credibility. Although a universally acceptable definition of credibility has not been established, there is general agreement that a need exists for a large sample of loss events on which to base conclusions to reflect credibility in ratemaking. For example, well over a million automobile policies can be used in a given state to estimate the losses incurred for this group. The group would be large enough so no one incident could distort the outcome. For product liability rates, having credible data becomes problematic due to the relatively small number of manufacturers of each type of product, the large variety of products within a given class, and often the large number of products for a given manufacturer.

Because of the need for large numbers to provide a credible statistical basis for ratemaking, most product liability carriers have chosen to report their monoline* premium and loss data to the Insurance Services Office (ISO), which aggregates the data from all subscribing carriers and publishes suggested rates based on their aggregate countrywide experience. As of December 31, 1975, 783 - or 89 percent - of the major U.S. underwriters of general liability coverage were ISO members and subscribers or service purchasers and, as such, reported their experience data for ratemaking purposes.** All of the sample companies contacted in our survey are subscribers to ISO.

Product liability insurance, as described earlier in this section, is offered through several types of policies. This fact has created additional problems in ratemaking. Because of the manner in which data are recorded by insurers, only the experience from monoline, manually rated, Comprehensive General Liability policies have been reported in sufficient detail for ratemaking purposes. Industry and ISO representatives have estimated that only 10 to 20 percent of the actual product liability experience has been used for ratemaking, because of the difficulties in gathering the data from policies other than monoline general liability.

* The term monoline is used to identify a liability policy which includes coverage for a variety of liability exposures including products liability. Throughout this report, it is used to refer to products coverage provided through the Comprehensive General Liability (CGL) policy.

** Best's Aggregate and Averages 1975 - listing of 882 insurance companies writing comprehensive general liability insurance in a majority of the states. They estimate that there are an additional 1,000 small, local, or regional companies who offer such cover.

In view of the limited data available, the Insurance Services Office has developed rates in two distinct categories: manual rates and (a) rates. The distinction between these two groups is important.

"Manual" Rates

Manually rated classifications (i. e., product classifications for which rates are published by ISO in a manual) consist of those categories of products for which a sufficient volume of detailed experience data (e. g., premiums, losses, and exposures) has been reported to ISO for rates to be determined actuarially. These rates are filed for approval according to individual state regulations. On the 418 product classifications listed in the manual, 287, or 67 percent, are manually rated. ISO representatives have estimated that these manually rated classifications account for 25 percent of the product liability exposures written on a monoline basis.

Product classifications included in manual classes can be generally described as relatively low hazard. The classification does not include such products as industrial chemicals, industrial grinding and abrasive products, pharmaceuticals, or many industrial machinery classifications.

(a) Rates

For those classifications of products for which insufficient data are reported to calculate a rate through actuarial techniques, or when a high degree of variability in experience exists within a product class, the alternative is to use a rate that is based primarily on judgment. These rates are called "(a) rates." For the most part, records of premiums and losses attributable to products in the (a) rate category have not been kept separately, because many of these products are written in commercial package policies or policies rated on a composite basis. Although ISO has been unable to develop statistically sound rates for these classifications of products, they have developed, on a judgmental basis, a series of suggested basic limits rates to provide some guidance for their subscribers who can then vary their own rates, as they feel appropriate.

ISO's procedure is to send these (a) rates to the Chief Executive of their subscribing companies for their individual consideration. Individual insurance carriers are expected to modify the rates in this category in determining what rates to use for a specific risk.

To accommodate practical reality, for (a) rated product classifications most state regulators have permitted insurers to charge rates based upon their own judgment. These judgmental (a) rates can be used for the 131 product classifications for which ISO has developed no manual rates. In addition, (a) rating can be used for risks that: (1) produce product liability premium (at basic limits manual rates) in excess of \$1,000; (2) produce increased limits premium of \$2,500 or more; or (3) produce policy manual basic limits premium of \$100,000 or more. Additionally, premiums for limits in excess of \$300,000 for bodily injury and \$50,000/\$100,000 for property damage can be (a) rated. Finally, excess rates or surcharges can be applied for any reason, with the insured's consent. Depending upon the state(s) involved, these (a) rates may not have to be filed with the insurance commissioner but should be documented in the underwriter's file and made available to state examiners during rate examinations.

Considerations
In Determining
Basic Limits Rates

In determining (a) rates to use (and occasionally in selecting the appropriate manual rate), the underwriter takes the following factors into consideration:

1. Geographical differences in risk potential - although rates are made on a countrywide basis
2. Presence of outstanding products for which no premium has been developed but on which claims may arise
3. Variation in risk potential based on ultimate use
4. Exposure base (sales) which may not be an accurate measure of risk potential.

These factors are taken into consideration in a number of ways. In some companies, the existence of a large number of outstanding products for which no premium is directly charged influences the underwriter to use another rating classification under which a higher rate may be charged. In another example, the use of a potentially high-hazard product under carefully controlled circumstances has been cited as rationale for applying a product classification which carries a lower rate.

In summary, the determination of the appropriate basic limits rate is primarily a judgmental exercise. Even for manually rated classifications, where the basic rate is based on aggregate experience, some judgment may be involved in selecting the appropriate classification. For (a) rated products, the determination of the basic rate is almost entirely judgmental.

CHANGES IN RATEMAKING PROCEDURES

In recognition of the deficiencies of the current ratemaking system, a number of actions have been taken by ISO to improve the statistical system:

1. Increase the number of product classes on which data are reported in sufficient detail for ratemaking. As of mid-1974, the statistical reporting requirements for all companies reporting to ISO were modified so that detailed data will be reported for almost all (a) rated classifications. ISO representatives estimate that the results of this step will be reflected in rate adjustments by mid to late 1977. Through this step, the actual premium, loss, and exposure data for almost all product categories should be available. This step will begin to close the reporting gap between the statistically developed manual rates and the subjectively determined (a) rates. Additionally, this 1974 revision refined various categories of products to eliminate many but not all of the general classes termed "products not otherwise classified," which had been used to rate product exposures which could have had vastly different exposures. There are now 418 distinct product classifications.
2. Reflect commercial package product liability experience in product rates. This modification is scheduled to begin on January 1, 1978, in conjunction with a planned revision in the Commercial Statistical Plan (the detailed, uniform steps followed by insurers in coding and reporting their data to ISO). Through this change, monoline and multiline experience will be equally detailed and useful for ratemaking purposes.
3. Code general liability subline to reflect composite-rated loss transactions. In the past, product liability losses could not be distinguished from other general liability losses in composite-rated policies. In 1974, the Commercial Statistical Plan was

changed so that losses attributable to product liability can be recognized and used in the development of trend factors and increased limits factors.

4. Increase accuracy and timeliness of data. Steps have been taken to improve the accuracy and timeliness of the statistical data: (a) trend statistics - used in determining the period over which an established rate would remain effective - will be available within 6 months of the end of each calendar quarter, thereby making rates more responsive to changes in experience; (b) trend data will include average claims cost data on an incurred basis - this modification is aimed at eliminating the delay now caused by waiting for paid claim data; and (c) the due date for company submission of premium and exposure statistics to ISO will be accelerated.
5. Elimination of composite rating for product liability insurance. According to ISO, effective January 1, 1977, composite rating will be allowed for product liability coverages only when the risk develops sufficient premium to qualify for large (a) rating or loss rating.

D.5 - SUMMARY

In summary, product liability insurance is underwritten and priced in a variety of ways. Usually, coverage is provided in combination with other coverages. For low-hazard products produced by smaller companies with low or predictable loss experience, coverage is usually provided on a manually rated, monoline,* or package policy on a prospective or guaranteed cost basis. For larger organizations with higher-hazard products, coverage is often provided on a monoline policy using (a) rates, composite rates, or loss rates in accordance with a negotiated retrospective rating plan. Rates for product liability insurance are based largely or, for some products, entirely on nonstatistically derived, judgmental estimates of loss frequency and severity. Further, the rates can be modified, based on prior loss experience and nontangible factors. Thus, while actuarial considerations are a part of determining the appropriate rate levels, the impact of actuarial analysis on the final rate used is minimal. Exhibit D-5 presents a profile of the combination of coverages and rating methods and plans most likely to be used by insureds at three different risk size levels.

*(CGL) policy

PROFILE OF PRODUCT LIABILITY

COVERAGE AND RATING PLANS

<u>Size of Insured</u>	<u>Insurance Program Characteristics</u>
I. Small*	
Average sales under \$2.5 million	. Purchase primary product coverage as part of Monoline (CGL) policy written on a guaranteed cost basis . Product rates are usually based on industry class averages as policy is too small to qualify for experience rating (manual rates) . Excess coverage is usually provided by an "umbrella" policy
II. Medium*	
Average sales \$2.5 million to \$50 million	. Purchase primary product coverage as part of package policy with the liability portion written on a guaranteed cost basis . Product rates are usually based on underwriter's judgment (i. e., (a) rated) . Policy premium is often large enough to qualify for the application of experience and schedule rating plans . Excess coverage is usually provided by an "umbrella" policy
III. Large	
Average sales over \$50 million	. Purchase primary product coverage as part of Monoline (CGL) policy written on a retrospective rating plan . Product rates are usually based on underwriter's judgment or on (a) rate or composite/loss-rated basis; experience and schedule rating plans are applied . Several layers of excess coverage are purchased from many different companies both in the United States and the United Kingdom

* - Programs similar to those purchased by large companies are purchased by small and medium companies if they manufacture high-hazard products and can afford the premium.

E - SERVICES PROVIDED TO POLICYHOLDERS

Insurance companies earmark a portion of their premium dollars for loss prevention and control and claims handling. In so doing, they are motivated as much by self-interest as by altruism: They want to minimize potential losses and effect speedy and equitable settlements.

This section describes the loss prevention and control practices of commercial insurers and their approach to claims handling.

LOSS PREVENTION AND CONTROL

As we noted in Section C, the underwriting process is set in motion when the agent or broker sends the underwriter a prospective insured's request for coverage. At that time, the agent also submits risk facts to assist the underwriter in deciding whether to accept or decline the risk. These risk facts reflect specific physical and procedural characteristics of the potential policyholder which could influence the chance of loss. In each of the insurance companies we contacted, these characteristics are documented in a risk survey form along with specific recommendations for closing any gaps between sound practices (based on a variety of "consensus" standards) and those followed by the prospective insured.

The underwriter reviews these recommendations and the risk survey form to decide: (1) whether the risk fits his company's profile of desirable business; (2) whether noncompliance with the risk improvement recommendations would preclude the offer of coverage; and (3) what coverage/premium combination should be offered, given a specified degree of compliance.

If the risk facts and the seriousness of the improvement recommendations raise doubts in the underwriter's mind about the desirability of the prospective client, the underwriter may decline the risk. Sixty-six percent of our sample companies have developed written guidelines defining the type of product that normally requires a loss control survey before a final underwriting decision can be made. In addition to product hazards,

the size of the insured's business may also be a consideration. Data from the underwriting file survey indicate that large companies are surveyed more often than small, although our interviews indicate that this is changing, particularly for smaller manufacturers.

The specific objectives of the loss control survey, and the expertise dedicated to it, are considered below.

Objectives of Loss Control Survey

When the underwriter decides that a risk survey is required, he completes a survey request form and an available surveyor, who handles the territory in which the manufacturer is located, is assigned to the task. The request usually indicates which hazards are to be evaluated - e.g., fire, premises operations, workers' compensation, automobile, product liability. In evaluating fire hazards, for example, the surveyor would look for the presence of fire detection and suppression systems; in workers' compensation, he looks for industrial environmental hazards, such as the presence of PVC in the atmosphere or the workplace decibel rating.

For product hazards, the surveyor's objective is to identify those characteristics of the product's manufacturing process, handling, storage, or ultimate use which contribute to losses so the manufacturer can take steps to reduce or eliminate the problem and the underwriter can have additional data on which to base his assessment of the risk. In any case where the surveyor finds correctable hazards, he recommends the measures to be taken and forwards the recommendations to the underwriter, who transmits them to the insured directly or through the agent or broker handling the account.

For risks with many potential improvement opportunities, loss control surveyors typically schedule a series of follow-up visits during the policy term to assist the insured with his loss prevention activities. It is important to note that any recommendations indicated carry no direct enforcement procedure. If the prospective insured decides to implement the steps suggested, the underwriter takes this decision into account in his pricing calculation; if the insured does nothing and the underwriter believes that the recommendations are essential, the underwriter refuses to provide the coverage sought. (Underwriters and loss control specialists mentioned that more and more insureds recognize the importance of complying with loss prevention recommendations and that they have few problems in gaining agreement on the actions to be taken.)

Expertise of Loss Control Surveyors

With some notable exceptions, loss control surveyors are not experts in the processes they are assessing. Rather, they are generalists who understand basic good housekeeping requirements such as the need for fire extinguishers, the importance of guardrails, and good lighting conditions. Often they are aware of the need for top-management support of loss control efforts and look for a corporate policy on worker and consumer safety and for a concern with safety in the design, testing, manufacturing, distribution, and advertising of the prospective insured's products.

To develop multidisciplined surveyors, insurance companies provide:

- ¶ On-the-job training by more senior surveyors
- ¶ Seminars focused on specific hazards, industries, or topics - e. g., construction, advanced fire detection technology
- ¶ A loss control or survey manual that offers guidance on particular hazards and outlines effective loss prevention techniques.

Some insurance companies supplement the generalists with specialists having extensive expertise in areas where the company writes a high volume of exposures. These specialists, usually few in number, are often based in the insurer's home office. They review reports prepared by the field generalists, give their opinion of risks, conduct training programs, write survey guides, and occasionally evaluate exposures firsthand.

The scope of these specialists varies. Most large companies have product liability experts; others that concentrate on certain types of risks have specialists that reflect their unique book of business. For example: One company that says it writes over 75 percent of the grinding wheel business has an abrasive grinding wheel loss control expert. This company can afford such an expert since it has: (1) the premium volume to support specialization; (2) enough exposures to know how to differentiate the good risk from the poor; and (3) the ability to communicate the need for recommended loss controls owing to its broad industry experience and its familiarity with claims-producing hazards.

Besides having in-house specialists, some insurers have developed other loss prevention capabilities. For example, four of our sample companies indicated that they had designed product testing facilities that include professional quality control engineers, packaging consultants, and legal / technical assistance in the development of instructions for product labeling and use.

CLAIMS HANDLING

All of the insurance companies surveyed perceive product liability claims as more complex and potentially more costly than claims arising from other lines of insurance. Thus, they have instituted special procedures for managing the three aspects of the claims-handling process - the investigation, the setting of reserves, and the litigation/negotiation.

Investigating Claims

Insurers are notified of product liability claims by the agent or broker handling the account, by the insured directly, or by suit papers, which may be the first notice of loss. Their first step is to determine whether the loss was covered under the conditions set forth in the policy.

In our sample of 12 companies, all reported that they assigned product liability claims to a senior claim handler/claim representative at the outset. Although we did not check on the average experience or prior training of these individuals, 75 percent of the companies said that they had conducted training sessions in the past 3 to 5 years on the procedures to be followed in investigating a product liability claim.

The routine steps of investigation are as follows:

- ¶ Identify the product by manufacturer, serial number, lot, and/or batch number.
- ¶ Trace the history of the product after purchase.
- ¶ Determine the conditions under which accident occurred.
- ¶ Obtain relevant supporting information such as statements from witnesses, pictures.
- ¶ Secure the product for analysis and testing as required.
- ¶ Determine the additional information required to support/refute the claim.

Three of the sample companies reported that they have trained product specialists who exclusively handle claims in certain categories (pharmaceuticals, industrial chemicals, abrasive products, and punch presses).

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- ¶ Secure the product for analysis and testing as required.
- ¶ Determine the additional information required to support/refute the claim.

Three of the sample companies reported that they have trained product specialists who exclusively handle claims in certain categories (pharmaceuticals, industrial chemicals, abrasive products, and punch presses).

These individuals are notified immediately of all claims in the designated categories and are directly responsible for managing the claims-handling process.

Setting the Reserve

The responsibility of setting the case reserve - that is, valuing the ultimate dollar liability of a given claim - varies among companies according to the size of the reserve. Field offices typically have reserve limits. Amounts over these limits require the approval of either the regional or home office. The reserve reflects an estimate of the total ultimate value of the claim and an estimate of the degree of liability that the insurer has on a given claim. Methods of taking the likelihood of liability into account vary among companies. Case reserves are generally reviewed periodically and adjusted as necessary to take into account any developments on the case that are likely to affect the ultimate payment.

In addition to case reserves established for known claims, the insurer sets reserves for future claims arising from incidents that have not yet been reported. In all sample companies, the determination of incurred but not reported (IBNR) reserves is the responsibility of the actuarial department and has no bearing on the individual reserve setting for a given claim. The actuaries generally based IBNR reserves on an analysis of trends over time for the entire miscellaneous liability line rather than for product liability as a separate category.

Using Outside Attorneys

All companies in our survey use outside attorneys to supplement their internal staff in handling product liability claims. These attorneys are chosen for their expertise in product liability cases and, in some instances, in several specific product lines. The actual responsibility of an outside attorney varies considerably, ranging from serving in a limited capacity as requested to handling the claim from inception.

The extensive use of outside attorneys parallels insurers' concern over rising claims costs. In general, companies feel that the one way to control these costs is to have the best possible defense expertise on hand for claims litigation.

APPENDIX TO CHAPTER 1

A - Underwriting File Analysis: File Selection Procedure

B - Summary of Data From Underwriting File Analysis



A - UNDERWRITING FILE ANALYSIS:FILE SELECTION PROCEDURE

To learn the actual underwriting practices (including both risk selection and pricing) used by major writers of product liability insurance, we gathered firsthand data from the underwriting files of six companies - five stock and one mutual. All companies agreed to participate with the understanding that we would not identify the practices of an individual company or the names of policyholders. The six participating companies were:

- ¶ Aetna Life and Casualty
- ¶ CNA
- ¶ Continental
- ¶ The Hartford
- ¶ Liberty Mutual
- ¶ Travelers.

The principles of file selection were as follows: (1) to select a stratified sample of product liability accounts written by each company; (2) to select a larger number of manufacturing companies than retailers, wholesalers, or service organizations. This selection focus was intended to provide a richer concentration of files in the eight product categories than would result from an entirely random review. The specific file selection procedure followed in each company was designed by a member of our staff after obtaining an understanding of the company's filing and authority delegation systems. This procedure was influenced by the extent to which product liability coverage was underwritten in the home office versus a field location. Since files underwritten (or reviewed) by the home office were found to contain a greater representation of the eight target product categories than those underwritten exclusively in field branches, the final sample included a higher proportion of home office files. Members of our professional staff analyzed all of the 3,000 files in the sample. The time spent per file varied with the complexity of the case, but ranged from 10 to 90 minutes. The following paragraphs describe how the selection principles were adhered to in each company.

- ¶ In one company, only the home office and two branch offices had authority to write product liability coverage. Researchers personally selected a sample of files from the total policies in force by going through the file drawers, pulling the files in a pre-determined sequence (every fifth file), and discarding those policies containing no product coverage.
- ¶ For two other companies, product liability coverage was underwritten in a large number of field offices. For these companies, we chose three to five branch offices in highly industrial areas and selected a random sample of files for review from a home office internal audit computer printout, which listed all commercial liability policies containing product liability coverage. We then sent the file numbers selected to the branch offices, asking them to pull the required number of files for analysis by our research staff. For several branches, the selected sample of files equaled the total number of product liability policies underwritten within the branch; thus, the analysis was completely representative.
- ¶ Two of the participants had partial lists of policies with product coverage - one listed those of a certain premium size; the other, those of a certain type (Commercial General Liability - not packages). To ensure that our sample contained policies not contained in these lists, our researchers supervised and participated in the physical selection of a random sample of files not included on these lists.
- ¶ Finally, one company had limited information about the amount and types of product liability coverages written by the branch offices. In this case, researchers physically selected approximately 75 percent of the national accounts written by the home office and chose the branch office sample from a listing of files referred to the home office because the risk contained an unusual product exposure, was (a) rated, or desired higher than usual limits. In addition, the researchers supervised file selection at the branch offices visited.

The analysis of the data gathered during our review of underwriting files is displayed in Tables 1 through 8 which follow. The data were used to support many of our conclusions in Chapters 1 and 2 and helped confirm our findings concerning the patterns of response for the product categories selected by the Department of Commerce for our special attention. These findings appear in Section C of Chapter 3. The data sheet used to collect the underwriting file information follows.

DATA SHEETS USED FOR

UNDERWRITING FILE REVIEW



<u>Ques. #</u>	<u>I D #</u>	<u>Card #</u>	<u>Response*</u>	<u>K. P. Column</u>
1.	☐ ☐ ☐ ☐ ☐	☐ 1		1 - 5
2.	New = 1/Renewal = 2			6
3.	Policy Period Yrs: (1, 2 or 3)			7
4.	Inception Year: (Format 1974=74) _____			8 - 9
5.	Type of Policy:			10
	1=Monoline CGL,	4 = Excess	7 = Other (Specify)	
	2=CGL Prod. Only	5 = Umbrella		
	3=Package	6 = Layer		
6.	Rating Plan			11
	1=Manual	4 = Loss Rated		
	2="A" Rated	5 = Composite Rated		
	3=Retro	6 = Flat Rated		
7.	Limits: 1 = Total, 2 = Product			12
8.(I)	Limits: (\$000) BI	_____ /		13 - 16
8.(II)	BI	_____ /		17 - 20
8A(I)	Limits: CSL	_____ /		21 - 24
9.(I)	Limits: PD	_____ /		29 - 32
	PD	_____		33 - 36
11.	Deductible 1974-75			45 - 50
12.	Deductible 1975-76			51 - 56
13.	Basis:			57
	1=Property Damage	3=Combined		
	2=Bodily Injury	4=Products		
14.	Total Premium (\$000) Policy Yr: 73-74			58 - 62
15.	Total Premium (\$000) Policy Yr: 74-75			63 - 67
16.	Total Premium (\$000) Policy Yr: 75-76			68 - 72
20.	Company Data: Total Sales (\$000)			73 - 80

<u>Ques #</u>	<u>Card #</u>	<u>Response</u>	<u>K. P. Column</u>
	☐ ☐ ☐ ☐ ☐	☐ 2	
17.	Min Premium; 1=Yes, 2=No 1973-74		1 - 5
18.	74-75		6
19.	75-76		7
22.	Type of business		8
	1=wholesaler	3=manufacturer	9
	2=retailer	4=service	
32.	Total Premium (products only) (\$000): 1973-74		10 - 14
33.	74-75		15 - 19
34.	75-76		20 - 24
35.	Risk written with franchise or assoc. Agreement i 1=Yes; 2=No		25
36.	Facultative Reinsurance: 1=Yes; 2=No		26
46.	Date of latest report: _____		27
	(Products or other exposures)		
49.	Safety Dividend Program: 1=Yes; 2=No		28
50.	Products exposure surveyed: 1=Yes; 2=No		29

Ques #	ID#	Card #	Response	K. P. Column
	☐ ☐ ☐ ☐	☐ 2		
51.	Underwriting evidence of insured's prod. line			1 - 5
	1=Products brochure 4=D&B Report			
	2=Specifications 5=Loss Control Survey			
	3=Annual Report 6=Other(Specify)			

ENTER ALL APPLICABLE CODES: _____ 30 - 35

52.	Policy Total: # of losses 1973	_____	36 - 39
53.	Paid loss (\$000) 1973	_____	40 - 44
54.	Total Incurred (\$000) 1973	_____	45 - 49
56.	# of Losses 1974	_____	50 - 53
57.	Paid Losses (\$000) 1974	_____	54 - 58
58.	Total Incurred (\$000) 1974	_____	59 - 63
60.	# of Losses 1975	_____	64 - 67
61.	Paid Losses: (\$000) 1975	_____	68 - 72
62.	Total Incurred (\$000) 1975	_____	73 - 77

Ques #	Card #	Response	K. P. Column
	☐ ☐ ☐ ☐	☐ 3	
64.	Products only Total: # of Losses 1973		1 - 5
65.	Paid Loss (\$000) 1973		6 - 9
66.	Total Incurred(\$000) 1973		10 - 14
68.	# of Losses 1974		15 - 19
69.	Paid Loss (\$000) 1974		20 - 23
70.	Total Incurred (\$000) 1974		24 - 28
72.	# of Losses 1975		29 - 33
73.	Paid Loss (\$000) 1975		34 - 37
74.	Total Incurred (\$000) 1975		38 - 42
			43 - 47

76.	Individual Prod. Line: Type Code			48 - 56
77.	: SIC Code			57 - 60
78.	: Product Code			61 - 65
79.	: Sales (\$000) 1973			66 - 71
80.	: Units of Prod (000) 1973			72 - 77

Card #	Response	K. P. Column
☐ 4		1 - 5
81.	: Rate/(\$1000) B. I. 1973	6 - 12
82.	" " P. D. 1973	13 - 19
85.	: Sales (\$000) 1974	20 - 25
86.	: Units of Prod(000) 1974	26 - 31
87.	: Rate/(\$1000) B. I. 1974	32 - 38
88.	" " P. D. 1974	39 - 45
91.	: Sales (\$000) 1975	46 - 51
92.	: Units of Prod (000)1975	52 - 57
93.	: Rate/(\$1000) B. I. 1975	58 - 64
94.	Rate/(\$1000)P.D.1975	65 - 71

Ques #	ID #	Card #	Response	K. P. Column
	☐ ☐ ☐ ☐	☐ 5		1 - 5
76.	Individual Product Line: Type Code		-----	6 - 14
77.		: SIC Code	-----	15 - 18
78.		: Product Code	-----	19 - 23
79.		: Sales (\$000) 1973	-----	24 - 30
80.		: Units of Prod (000) 1973	-----	31 - 37
81.		: Rate/(\$1000) BI 1973	-----	38 - 44
82.		: " " PD1973	-----	45 - 51
83.		: Sales (\$000) 1974	-----	52 - 58
84.		: Units of Prod (000) 1974	-----	59 - 65
85.		: Rate/(\$1000) BI 1974	-----	66 - 72
86.		: " " PD1974	-----	73 - 79

Card # ☐ 6 1 - 5

87.		: Sales (\$000) 1975	-----	6 - 12
88.		: Units of Prod (000) 1975	-----	13 - 19
89.		: Rate/(\$1000) BI 1975	-----	20 - 26
90.		: " " PD1975	-----	27 - 33

Ques #	ID #	Card #	Response	K. P. Column
	☐ ☐ ☐ ☐	☐ 7		1 - 5
76.	Individual Product Line: Type Code		-----	6 - 14
77.		: SIC Code	-----	15 - 18
78.		: Product Code	-----	19 - 23
79.		: Sales (\$000) 1973	-----	24 - 30
80.		: Units of Prod (000) 1973	-----	31 - 37
81.		: Rate/(\$1000) BI 1973	-----	38 - 44
82.		: " " PD1973	-----	45 - 51
83.		: Sales (\$000) 1974	-----	52 - 58
84.		: Units of Prod (000) 1974	-----	59 - 65
85.		: Rate/(\$1000) BI 1974	-----	66 - 72
86.		: " " PD1974	-----	73 - 79

Card # ☐ 8 1 - 5

87.		: Sales (\$000) 1975	-----	6 - 12
88.		: Units of Prod (000) 1975	-----	13 - 19
89.		: Rate/(\$1000) BI 1975	-----	20 - 26
90.		: " " PD1975	-----	27 - 33

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Ques #	ID #	Card # *	Response	K. P. Column *
	☐ ☐ ☐ ☐	☐ 9		1 - 5
76.		Individual Product Line: Type Code	-----	6 - 14
77.		: SIC Code	-----	15 - 18
78.		: Product Code	-----	19 - 23
79.		: Sales (\$000) 1973	-----	24 - 30
80.		: Units of Prod (000) 1973	-----	31 - 37
81.		: Rate/(\$1000) BI 1973	-----	38 - 44
82.		: " " PD1973	-----	45 - 51
83.		: Sales (\$000) 1974	-----	52 - 58
84.		: Units of Prod (000) 1974	-----	59 - 65
85.		: Rate/(\$1000) BI 1974	-----	66 - 72
86.		: " " PD1974	-----	73 - 79
		Card # ☐ 0		1 - 5
87.		: Sales (\$000) 1975	-----	6 - 12
88.		: Units of Prod (000) 1975	-----	13 - 19
89.		: Rate/(\$1000) BI 1975	-----	20 - 26
90.	↓	↓	: " " PD1975	-----
				27 - 33

* Note: "Card" and "K. P." refer to keypunch card and card column numbers.
They are instructions for the data processing personnel.

B - SUMMARY OF DATA FROM
UNDERWRITING FILE ANALYSIS



Table 1

UNDERWRITING FILE ANALYSIS
NUMBER OF INSURED, SIZE AND TYPE OF BUSINESS

Target Industries	Product Lines Identified	Size Distribution*		Type of Business**			
		Small Under \$2.5MM	Large Over \$2.5MM	Manufac- turer	Retail	Whole- sale	Service
1. Industrial machinery	72	60%	40%	90%	3%	7%	-
2. Industrial grinding and abrasive products	15	36	64	100	-	-	-
3. Ferrous and non-ferrous metal casting	64	33	67	97	1	1	-
4. Industrial chemicals: organic and inorganic	23	37	63	91	-	5	4%
5. Aircraft components	7	33	67	100	-	-	-
6. Automobile components and tires	43	39	61	76	4	15	5
7. Medical devices	21	59	41	76	-	19	5
8. Pharmaceuticals	19	13	87	100	-	-	-
All other industries	2776	72	28	61	21	12	6
Total product lines identified	3040						
Total underwriting files reviewed	2955						

* - In some files, data on sales volume or business classification were not available. Percentages shown are percentages of files for which data were available.

** - Number of product lines is greater than the number of underwriting files because several companies have operations involving more than one product grouping - e.g., a company manufacturing both pharmaceuticals and industrial chemicals is shown in both categories.

Table 2

PERCENTAGE DISTRIBUTION* OF POLICY TYPES BY
TARGET INDUSTRY, COMPANY SIZE, AND TYPE OF BUSINESS

<u>Target Industries</u>	<u>Monoline Commercial General Liability</u>	<u>Products Only</u>	<u>Package</u>	<u>Excess and Umbrella</u>
1. Industrial Machinery	41%	0%	54%	5%
2. Industrial grinding and abrasive products	60	0	33	7
3. Ferrous and nonferrous metal castings	55	0	36	9
4. Industrial chemicals: organic and inorganic	91	0	0	9
5. Aircraft components	50	0	33	17
6. Automobile components and tires	61	5	22	12
7. Medical devices	57	0	38	5
8. Pharmaceuticals	61	11	22	6
All other industries	49.2	0.5	45.6	4.7
<u>Size of Company</u>				
Small companies (Under \$2.5 million)	42.6%	0.3%	54.2%	2.8%
Large companies (Over \$2.5 million)	65.2	1.1	25.0	8.7
Not reported	49.8	.9	40.9	8.3
<u>Business Type</u>				
Manufacturer	50.7%	0.6%	45.0%	3.7%
Retailer	42.7	0	47.4	9.9
Wholesaler	36.3	0.9	58.9	3.9
Service	76.5	2.5	20.2	0.8
Not reported	60.0	0	34.5	5.5

* - Percentage based on number of observations. For Target Industries this base was 3,040 and for Size of Company and Business Type, the total was 2,955.

Table 3

DISTRIBUTION OF RATING PLANS
BY TARGET INDUSTRIES, SIZE AND TYPE OF BUSINESS

<u>Target Industries</u>	<u>Number of Companies</u>						<u>Total</u>
	<u>Manual Rated</u>	<u>(a) Rated</u>	<u>Manual and (a) Rated</u>	<u>Retro</u>	<u>Composite Or Loss</u>	<u>Rating Plan Not Indicated</u>	
1. Industrial machinery	21	22	11	9	6	3	72
2. Industrial grinding and abrasive products	1	6	0	4	2	2	15
3. Ferrous and non- ferrous metal casting	6	17	3	24	8	6	64
4. Industrial chemicals: organic and inorganic	2	3	2	6	4	6	23
5. Aircraft components	1	1	0	2	1	2	7
6. Automobile components and tires	14	3	3	7	8	8	43
7. Medical devices	1	8	2	7	0	3	21
8. Pharmaceuticals	1	2	0	6	7	3	19
All other industries	<u>1178</u>	<u>654</u>	<u>290</u>	<u>241</u>	<u>202</u>	<u>211</u>	<u>2776</u>
Total* product lines identified	1225	716	311	306	238	244	3040
<u>Size of Company</u>							
Small companies	994	442	240	40	40	103	1868
Large companies	160	131	30	200	147	72	740
Not reported	<u>62</u>	<u>130</u>	<u>37</u>	<u>32</u>	<u>36</u>	<u>50</u>	<u>347</u>
Total underwriting files reviewed	1216	703	307	281	223	225	2955
<u>Business Type</u>							
Manufacturer	668	428	153	241	159	91	1740
Retailer	268	112	93	11	10	70	573
Wholesaler	139	103	39	12	22	20	335
Service	59	27	10	8	7	9	120
Not reported	<u>82</u>	<u>33</u>	<u>12</u>	<u>9</u>	<u>16</u>	<u>35</u>	<u>187</u>
Total underwriting files reviewed	1216	703	307	281	223	225	2955

* - Totals in Target Industries section are greater than those in Size of Company and Business Type sections because companies with operations in more than one product grouping are counted more than once in the Target Industries section.

Table 4

SIZE DISTRIBUTION OF COMPANIES
NUMBER OF COMPANIES IN EACH CATEGORY

Target Industries	1975 Sales Volume (\$ Million)							Sales Vol- ume Not Indicated
	Sample Size	<\$1	\$1-\$2.5	\$2.5-\$10	\$10-\$50	\$50-\$100	>\$100	
1. Industrial machinery	72	27	10	9	3	3	10	10
2. Industrial grinding and abrasive products	15	3	1	2	1	1	3	4
3. Ferrous and nonferrous metal castings	64	16	4	7	7	7	20	3
4. Industrial chemicals: organic and inorganic	23	6	1	1	1	-	10	4
5. Aircraft components	7	2	0	0	1	0	3	1
6. Automobile components and tires	43	12	3	4	8	0	11	5
7. Medical devices	21	8	2	-	1	1	5	4
8. Pharmaceuticals	19	1	1	2	3	-	8	4
All other industries	<u>2776</u>	<u>1357</u>	<u>420</u>	<u>322</u>	<u>182</u>	<u>49</u>	<u>125</u>	<u>321</u>
Total Product Line Identified	3040	1432	442	347	207	61	195	356
<u>Business Type</u>								
Manufacturer	1740	714	280	238	158	48	143	159
Retailer	573	366	66	38	13	3	5	82
Wholesaler	335	156	73	41	19	5	6	35
Service	120	91	6	5	4	1	1	12
Not reported	<u>187</u>	<u>79</u>	<u>14</u>	<u>19</u>	<u>9</u>	<u>2</u>	<u>5</u>	<u>59</u>
Total Underwriting Files Reviewed	2955	1406	439	341	203	59	160	347

Table 5

BODILY INJURY AGGREGATE LIMITS OF LIABILITYNUMBER OF COMPANIES IN EACH CATEGORY

Target Industries	Bodily Injury Aggregate Limit						
	Sample Size	Number with Combined Single Aggregates*	<\$50,000	\$50,000-\$100,000	\$101,000-\$500,000	\$501,000-\$1 Million	>\$1 Million
1. Industrial machinery	72	25	-	2	35	10	-
2. Industrial grinding and abrasive products	15	4	-	1	8	2	-
3. Ferrous and nonferrous metal casting	64	29	1	2	22	10	-
4. Industrial chemicals: organic and inorganic	23	10	-	-	10	1	2
5. Aircraft components	7	2	-	-	3	1	1
6. Automobile components and tires	43	14	1	3	20	4	1
7. Medical devices	21	9	-	-	9	2	1
8. Pharmaceuticals	19	10	-	-	5	3	1
All other industries	2776	968	40	93	1418	227	30
Total Product Lines Identified	3040	1071	42	101	1530	260	36
<u>Size of Company</u>							
Small companies	1868	623	28	75	1039	100	3
Large companies	740	267	4	5	315	126	23
Not reported	347	145	10	17	146	23	6
Total Underwriting Files Reviewed	2955	1035	42	97	1500	249	32
<u>Business Type</u>							
Manufacturer	1740	618	16	37	863	181	25
Retailer	573	190	12	32	324	14	1
Wholesaler	335	126	6	8	165	28	2
Service	120	29	5	11	63	12	-
Not reported	187	72	3	9	85	14	4
Total Underwriting Files Reviewed	2955	1035	42	97	1500	249	32

* - A combined single limit policy provides for fixed maximum payouts emanating from any combination of either bodily injury and/or property damage liability losses during the stated time period covered by the policy. As the combined single limit aggregate applies to both bodily injury and property damage, it is not comparable to the "split limit" approach.

Table 6

USE OF FACULTATIVE REINSURANCENUMBER OF INSURED

<u>Target Industries</u>	<u>Companies Using Facultative Reinsurance</u>	<u>Number Reporting</u>	<u>Percent Using Facultative Reinsurance</u>
1. Industrial machinery	12	72	17%
2. Industrial grinding and abrasive products	-	15	-
3. Ferrous and nonferrous metal castings	6	64	9
4. Industrial chemicals: organic and inorganic	2	23	9
5. Aircraft components	1	7	14
6. Automobile components	1	43	2
7. Medical devices	3	21	14
8. Pharmaceuticals	1	19	5
All other industries	<u>127</u>	<u>2776</u>	<u>5</u>
Total Product Lines Identified	153	3040	5
<u>Size of Company</u>			
Small companies	39	1868	2
Large companies	89	740	12
Not reported	<u>20</u>	<u>347</u>	<u>6</u>
Total Underwriting Files Reviewed	148	2955	5
<u>Business Type</u>			
Manufacturer	124	1740	7
Retailer	9	573	2
Wholesaler	4	335	1
Service	3	120	3
Not reported	<u>8</u>	<u>187</u>	<u>4</u>
Total Underwriting Files Reviewed	148	2955	5

Table 7

PERCENTAGE OF CASES WITH LOSS CONTROL SURVEYS

COMMENTING SPECIFICALLY ON

PRODUCT LIABILITY EXPOSURES

<u>Target Industries</u>	<u>Number of Companies Receiving Product Liability Loss Control Surveys</u>				<u>Percentage With Surveys (N. A. Excluded)</u>
	<u>Total</u>	<u>Yes</u>	<u>No</u>	<u>N. A.*</u>	
1. Industrial machinery	72	46	17	9	73%
2. Industrial grinding and abrasive products	15	12	2	1	86
3. Ferrous and nonferrous metal casting	64	34	10	20	77
4. Industrial chemicals: organic and inorganic	23	14	1	8	93
5. Aircraft components	7	4	2	1	67
6. Automobile components and tires	43	23	6	14	79
7. Medical devices	21	9	6	6	60
8. Pharmaceuticals	19	12	2	5	86
 All other industries	<u>2776</u>	<u>927</u>	<u>817</u>	<u>1032</u>	53
Total Product Lines Identified	3040	1081	863	1096	56
<u>Size of Company</u>					
Small companies (Under \$2.5 million)	1868	631	552	685	53
Large companies (Over \$2.5 million)	740	312	180	248	63
Not reported	<u>347</u>	<u>81</u>	<u>121</u>	<u>145</u>	40
Total Underwriting Files Reviewed	2955	1024	853	1078	55
<u>Business Type</u>					
Manufacturer	1740	717	530	493	57
Retailer	573	142	155	276	48
Wholesaler	335	108	118	109	48
Service	120	26	30	64	46
Not reported	<u>187</u>	<u>31</u>	<u>20</u>	<u>136</u>	61
Total Underwriting Files Reviewed	2955	1024	853	1078	55

* - Table 7 reflects the frequency of loss control surveys made specifically to assess product liability exposures based on comments in survey reports in the underwriting files. Survey reports that did not comment on product exposures are not included as receiving loss control services. Where the files were not set up so that the survey reports were available, they were not included in the reporting base.

USE OF DEDUCTIBLESTARGET INDUSTRIES, SIZE AND TYPE OF BUSINESSNumber of Companies in Each Category

<u>Target Industries</u>	<u>Size of 1975 Deductible</u>				
	0- \$1,000	\$1,000- \$9,999	\$10,000- \$24,999	\$25,000- \$50,000	\$50,000 And Over
1. Industrial machinery	1	1	-	1	6
2. Industrial grinding and abrasive products	-	-	-	1	2
3. Ferrous and nonferrous metal casting	-	-	-	2	3
4. Industrial chemicals: organic and inorganic	-	3	-	-	3
5. Aircraft components	-	-	-	-	1
6. Automobile components and tires	1	1	-	1	5
7. Medical devices	-	-	-	-	1
8. Pharmaceuticals	-	1	-	-	3
All other industries	58	5	4	4	15
<u>Size of Company</u>					
Small companies	38	2	-	-	-
Large companies	18	5	3	6	23
<u>Business Type</u>					
Manufacturer	32	6	3	6	23
Retailer	15	-	1	-	-
Wholesaler	6	2	-	-	-
Service	4	-	-	-	-

CHAPTER 2

UNDERSTANDING PRODUCT LIABILITY

INSURANCE COSTS

CHAPTER SUMMARY

This chapter examines the factors that determine the cost of product liability insurance, reviews trends in product liability insurance losses and profitability over the past 10 years, and describes the increases that have occurred in product liability insurance rates. We then analyze the impact of these rate increases on the eight categories of products selected for special attention and give our views on probable future trends in product liability insurance costs.

Our key findings and conclusions may be summarized as follows:

- ¶ Approximately half of the premium dollar is used to pay claim settlements and jury awards. This results in approximately 33 percent of total premium dollars going to claimants, if we assume an average contingent fee of 33-1/3 percent to plaintiffs' attorneys. Approximately 20 percent is used for expenses in handling claims, primarily legal defense costs. Slightly less than 25 percent is used to pay expenses of underwriting and administering the business, about half of which is paid to the broker or agent in commissions.
- ¶ Insurance companies have lost money on both the general liability business and the product liability business (which is part of the miscellaneous or general liability line), mainly because claims payments and related legal defense costs have risen more rapidly than premiums.
- ¶ After going for more than 10 years without increasing product liability insurance rates, insurers have moved rates upward sharply in the past 2 years. These rate increases vary widely by product classification, ranging all the way from minor decreases to increases of around 900 percent. With this variation, any "average" rate increase is only a rough indication

of the rate changes affecting a particular industry or group of products.

- ¶ Within the eight target product categories, rates generally have risen more than 100 percent. Even so, in almost 50 percent of the individual product classifications within these categories, current rates are less than 1 percent of sales. In 35 percent of the classifications, they are between 1 and 2 percent of sales.
- ¶ Considering the factors that have prompted these rate increases - the erosion of legal defenses against liability claims, high awards to plaintiffs, and uncertainty about future developments in the tort liability system - we believe that product liability insurance costs will continue to rise. However, we think it is unlikely that the rate of increase will be as great as in the past 2 years, since these increases were partly an adjustment to make up for substantial rate inadequacies in some product categories.

We have divided our discussion of these findings and conclusions into the following four sections:

- A. Product Liability Cost Components and Results Experienced by Insurers
- B. Changes in Product Liability Rates
- C. Significance of Rate Levels for Selected Product Classifications
- D. Outlook for Future Rate Increases.

The findings and conclusions are based on data provided by the Insurance Services Office; our review of some 3,000 underwriting files and several state rate filings; and interviews with insurance executives, underwriters, agents, and brokers, supplemented by the results of surveys made by agents' associations, by various trade associations, and by Gordon Associates for the Department of Commerce as part of this study.

A - PRODUCT LIABILITY COST COMPONENTS

AND RESULTS EXPERIENCED BY INSURERS

This section first discusses the elements of cost that are paid for by the insurance premium dollar. Next, it reviews and discusses trends in the experience of product liability insurers in the relationship between premiums and these cost components. Since product liability experience is not compiled separately by the insurance industry, this discussion draws on two sources of information: (1) the experience of major writers of miscellaneous liability insurance with that line of business, which includes product liability; and (2) reports compiled by the Insurance Services Office of premiums and losses for several categories of product liability.

COST COMPONENTS

Insurers generally expect premium dollars to cover loss costs and underwriting expenses in order to provide a satisfactory return on the capital at risk. There has been a long-standing controversy regarding the question of whether investment income earned on insurance reserve should be included in calculating profit margins for rate making purposes. Generally, insurers have argued that this investment income should be excluded on the ground that it is needed to expand underwriting capacity by augmenting surplus. Others, including some industry critics, believe that it should be included in determining appropriate profit margins. In the miscellaneous liability lines, where loss reserves tend to be higher as a percent of premium than in other lines, investment income on reserves is generally in the range of 5 to 15 percent of premium income.

The two major cost components are loss costs and underwriting expenses. Loss costs include both the actual payment made to settle the claim and expenses incurred in the claim investigation, legal defense, and settlement process (called loss adjustment expenses). Underwriting expenses include the salaries of underwriters, overhead allocations, provision for state bureau and board fees, and commissions for agents or brokers.

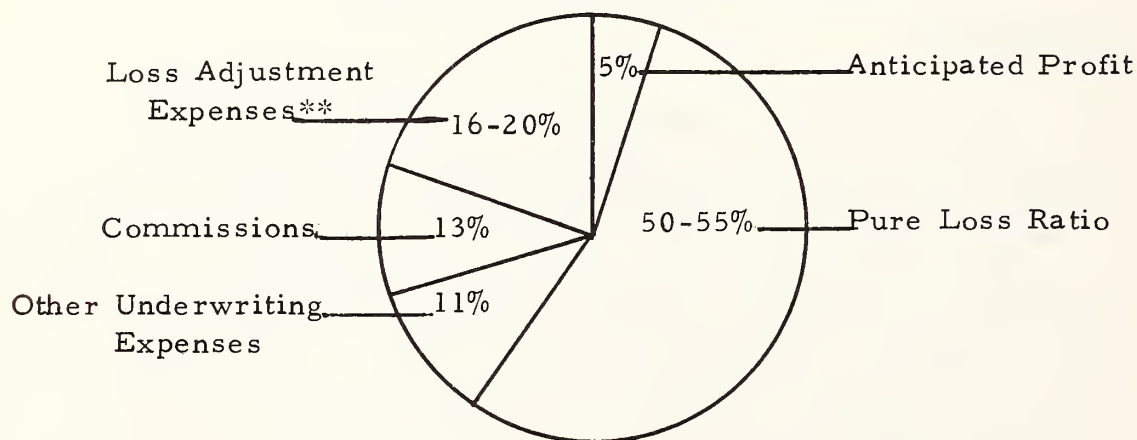
The relationship between these two types of costs and premiums is usually expressed by two ratios - the loss ratio and the expense ratio. The loss ratio measures incurred losses, plus loss adjustment expenses, as a percentage of earned premium. The accuracy of the loss ratio is largely dependent on the soundness of loss reserve levels. If reserves are understated, the loss ratio will be low - portraying an unrealistically optimistic picture. If reserves are overstated, an unrealistically negative

picture will be conveyed. The expense ratio measures underwriting expenses as a percentage of written premium.* The combination of these two ratios is the combined ratio. When the combined ratio is under 100 percent, premiums have been adequate to cover loss and expense payments; when the ratio is over 100, premiums have not been adequate.

Based on 1975 miscellaneous liability results, assuming premiums charged had been adequate to cover all costs incurred plus a 5 percent underwriting profit, premiums taken in would have been paid out in the approximate percentages shown in the chart below.

Exhibit A-1

Estimated Allocation of the
Product Liability Premium Dollar



Sources: 1975 Best's Aggregates and Averages, McKinsey calculations.

As the chart indicates, the pure loss ratio - that is, the ratio of dollars paid to claimants (excluding loss adjustment expenses) to dollars of premium earned - is approximately 50 percent. For product liability, the pure loss ratio is estimated to be an even smaller proportion of premium earned, primarily because of the higher defense costs associated with this line.

* - Individual insurance company reports to stockholders and A.M. Best's Reports calculate all expense components as a percentage of written premium. Insurance Expense Exhibits filed with State Insurance Departments calculate all expense components as a percentage of earned premium.

** - Recent ISO data from their Closed Claim Survey indicate that a range of 20-25 percent may be more appropriate for products liability.

If we assume the plaintiffs' attorneys take an average of one-third of victims' awards as their fee, the percentage of premium flowing to claimants is 33 percent (two-thirds of 50 percent). And to the extent that fees are higher, the victims' share is even less.

MISCELLANEOUS LIABILITY EXPERIENCE OF MAJOR WRITERS

There is no single comprehensive source of product liability experience data since the premiums and losses for this line have not been reported separately to state insurance departments. Product liability experience for coverage not included in commercial packages is reported as a part of miscellaneous liability insurance. Therefore, reviewing the results for the miscellaneous liability line should provide some indication of the profitability of the product liability component. To make this analysis reflect product liability results to the extent possible, we have focused on the experience of the 10 largest writers of miscellaneous liability insurance.* While these 10 companies are less than one percent of the approximately 1,295 companies writing miscellaneous liability insurance (stock companies 909; mutuals 303; reciprocals 42; and Lloyds associates 31), they accounted for almost 40 percent of the total miscellaneous liability premiums (excluding medical malpractices) written in 1975.**

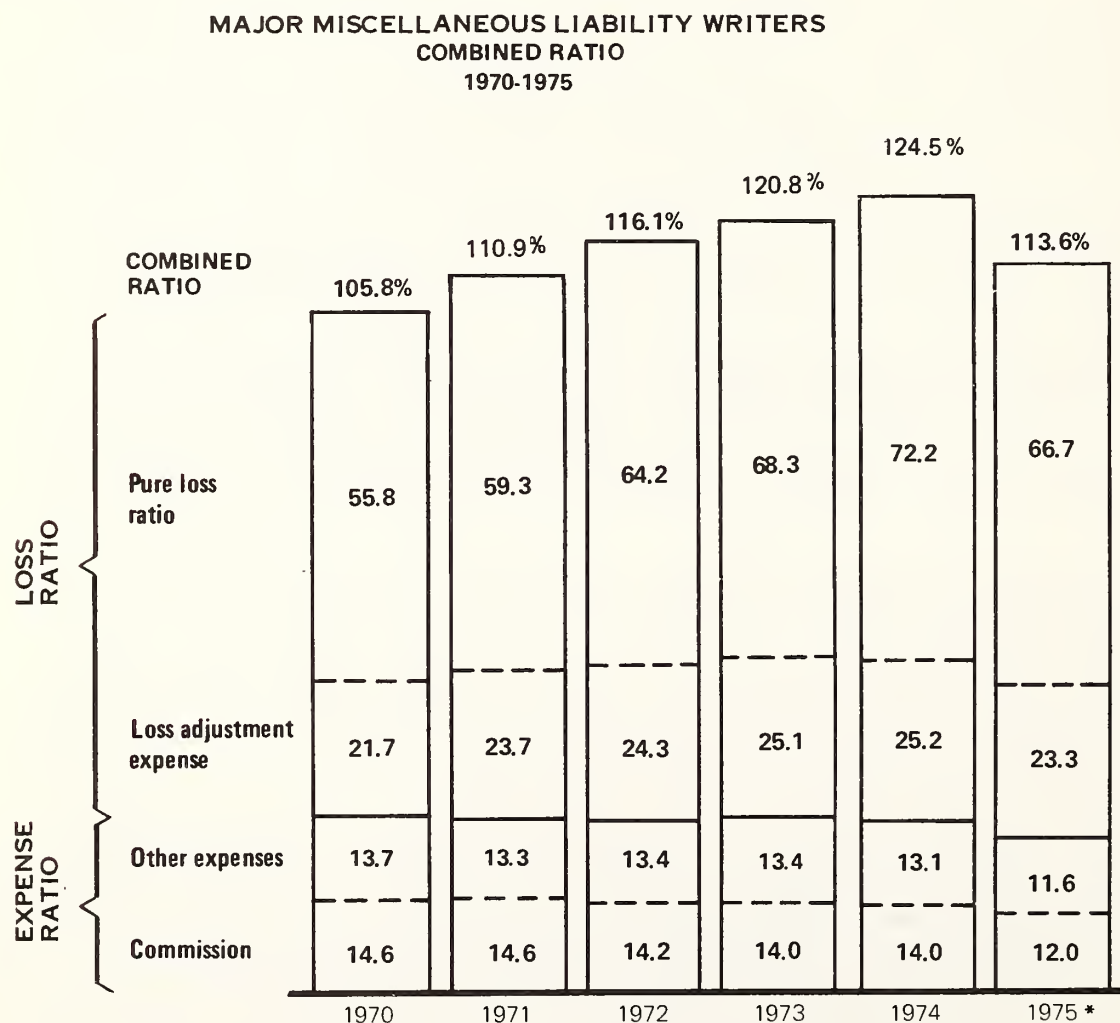
The Insurance Services Office has estimated that product liability coverage amounts to approximately 40 percent of the premium volume of the miscellaneous liability line. Some industry executives contacted during the course of this study believe that the 40 percent estimate may be high, their own estimates being in the 30 to 35 percent range. Industry executives indicate that the product liability portion of miscellaneous liability is by far the most hazardous component of this line - especially since medical malpractice results, formerly reported as a part of miscellaneous liability, have been reported separately beginning in 1975. The major coverages included in the miscellaneous liability line are OL&T (Owner's, Landlord's, and Tenant's Liability), M & C (Manufacturer's and Contractor's Liability), D & O (Director's and Officer's Liability), and the CGL policy. This policy can include many types of coverage such as: Completed Operations and Products Liability, Automobile Liability, Contractual liability insurance, garage insurance, and many others.

* - Source: Individual Company Insurance Expense Exhibits - 1975

** - Best's Review - Property Casualty Insurance Edition - July 1976;
McKinsey calculations

Over the past 5 years, these 10 major writers of product liability insurance have experienced combined ratios over 100 percent in each year for their miscellaneous liability line of business. As Exhibit A-2 indicates, the deterioration in the combined ratio is due to a worsening loss ratio. And a subsequent review of experience in years 1970 through 1974 as reported in Schedule P of individual company reports filed with State Insurance Departments has shown that the actual loss experience in these years was worse

Exhibit A-2



Source: Best's Aggregates and Averages.

* - Data include Medical Malpractice experience for all years (including 1975) so that figures are comparable. Without Medical Malpractice, the combined ratio for 1975 is 112.9 percent.

than indicated because loss reserves proved to be inadequate in relation to payments made on claims incurred in those years. The tendency to under-reserve is at least partly the result of the unexpectedly severe rate of economic and social inflation, which has affected product liability claims during this period. *

Best's Review has indicated that the 1975 pure loss ratio experience of all companies writing miscellaneous liability was 59.0 percent. This figure is not equivalent to the 66.7 percent pure loss ratio shown for the 10 largest writers in Exhibit A-2, since the former does not include changes in IBNR reserves, which normally are a part of the loss ratio calculation. ** Using the Best's Review data source for the 10 largest companies results in a 1975 pure loss ratio of 58.4. Thus, when compared on an equivalent basis, the experience of the major writers is slightly more favorable than the industry.

Alternatively, calculating the all-industry pure loss ratio and including changes in IBNR for 1975 yields a pure loss ratio of 67.2, a figure which is directly comparable to the 66.7 percent pure loss ratio for the 10 largest writers. ***

* - The pure loss ratio includes loss reserves as estimated by insurers.

** - Best's Review - "Premium Distribution by Line" - July 1976. Sources of data used to calculate pure loss ratios are company convention statements filed with each state insurance department and do not include changes in IBNR reserves.

*** - Source - Best's Aggregates and Averages, Property-Casualty 1976 Cumulative By-Line Underwriting Experience (weighted average) for Stock, Mutual, and Reciprocal Companies.

During the past decade, the aggregate miscellaneous liability underwriting losses of the 10 major insurers totaled \$1.3 billion (Exhibit A-3).

Exhibit A-3

<u>10-Year Total</u>		
<u>Miscellaneous Liability Statutory Underwriting Results</u>		
<u>1966-1975</u>		
1975* Miscellaneous Liability Written Premium Rank	Company	Underwriting Profit (Loss) (\$000)
1	Aetna Life & Casualty	(\$187,162)
2	Travelers	(274,645)
3	Hartford	(142,612)
4	Continental	(73,458)
5	Crum & Foster	(35,587)
6	Liberty Mutual	(176,273)
7	CNA	(143,516)
8	USF&G	(71,855)
9	St. Paul	(98,606)
10	Royal-Globe	(62,315)
		<u>(\$1,266,029)</u>

Source: Best's Aggregates and Averages, Company Convention Statements.

Experience in recent years has been the most severe of the 10-year period. From 1973 through 1975, miscellaneous liability statutory underwriting losses of the 10 companies amounted to \$775 million. These mounting losses have obviously put pressure on underwriters to take corrective action.

* - Source - Individual Company Insurance Expense Exhibits - 1975.

Data used for ranking exclude malpractice premiums but the cumulative underwriting losses include malpractice results.

PRODUCT LIABILITY EXPERIENCE REPORTED TO ISO

Reports of the Insurance Services Office (ISO) shed additional light on underwriting results for product liability business. ISO collects statistics for products in three categories: (1) manually rated classifications - usually low-hazard products; (2) (a) rated classifications - usually higher-hazard products for which loss potential varies widely with individual circumstances; and (3) composite, loss rated, and large (a) rated classifications. Experience data in all three of these categories are not solely for product liability coverage. In the first two categories, completed operations coverage experience is included. Neither industry representatives nor ISO analysts had data on the percentage of "pure" product liability experience in these data. For the third category, all general liability experience is included.

Exhibit A-4 presents the Insurance Services Office estimates of the distribution of product liability insurance among the various types of policies and rating plans. Based on these estimates, the manually rated classes of business may account for as little as 10 percent of the product liability insurance written.

Exhibit A-4

Product Liability Insurance

<u>Estimate of Percent of Total Product Liability Exposure</u>	<u>Types of Policies and Rating Plans</u>
40%	Commercial General Liability policies Manual rated 25% (a) Rated 75%
30	Commercial package policies (Commercial General Liability and Property coverages)
30	Composite Rated - Loss Rated - Large (a) rated Commercial General Liability policies

As discussed in Chapter 1, the distinction between manual and (a) rated product classifications shown in Exhibit A-4 turns primarily on the statistical significance of known loss experience for the product.*

- ¶ For products in the manually rated classifications, historical experience is available because premiums, losses, and exposures are reported by individual product classification to ISO; thus, basic limits rates for these products are derived from statistical analysis of loss frequency and severity.
- ¶ For (a) rated product classifications, only limited historical experience for that product is known. While ISO does publish "guides" or guide rates for these classifications, these are not actuarially based and are intended to be used only as a point of reference by member insurance companies. ISO's published (a) rates are thus subject to substantial upward or downward adjustments by the underwriter, depending on his assessment of the characteristics of an individual risk.

As of November 1, 1976, the latest 4-year period for which premium and loss experience was available ended on December 31, 1974.

Exhibit A-5 shows the aggregate ISO loss ratio experience for policies written using rates in the three categories described. Experience data included are calculated for policy years - that is, they include only the premiums and losses attributable to policies in force covering this period, not claim payments made during that period on claims incurred earlier.

* - Premium volume, limits of liability, and unusual characteristics of the product can also have a bearing on whether manual or (a) rates are used. For example, an individual policy that generates a product liability basic limits premium in excess of \$1,000 may be (a) rated even though the product qualifies in other respects as manually rated. Large accounts producing over \$100,000 in annual basic limits premium may be (a) rated. Accounts with limits in excess of \$300,000/\$300,000 BI and \$50,000/\$100,000 PD may have (a) rated increased limit factors applied. Finally, "unique or unusual" risks may be (a) rated.

Insurance Services Office Product Liability Experience ReportDecember 1971 - December 1974Bodily Injury and Property Damage Combined

<u>Policy Year Ended*</u>	<u>Earned Premiums</u>	<u>Incurred Losses***</u>	<u>Loss Ratio****</u>
<u>Manually Rated Classes</u>			
12/31/71	\$ 31,661,275	\$ (21,110,940)	66.7%
12/31/72	41,624,498	(29,018,341)	69.7
12/31/73	49,560,259	(35,431,429)	71.5
12/31/74**	44,748,085	(32,679,452)	73.0

(a) Rated Classes, excluding large (a) rated cases

12/31/71	85,984,805	\$ (97,574,782)	113.5%
12/31/72	120,110,961	(96,906,925)	80.7
12/31/73	167,144,160	(256,947,974)	153.7
12/31/74**	158,531,975	(199,568,635)	125.9

* - The reason more recent data are not available is due to the desire to report incurred losses as accurately as possible. When a loss is reported, a reserve is established based on the company's best estimate of the ultimate settlement or award and related expenses. However, as time passes, some of these claims will be paid and, based on further information, reserves on others can be restated to more accurately reflect the potential loss. Thus, while incurred loss data for more recent years could be compiled, it would be subject to a greater degree of uncertainty.

** - Preliminary data as of 12/1/76.

*** - Incurred losses include loss adjustment expenses as well as amounts paid to claimants and reserves on claims reported but not yet paid. Loss adjustment expenses amount to about one-third of incurred losses. They consist mainly of payments to defense attorneys, salaries for claim adjusters, and overhead expenses.

**** - Since underwriting expenses average around 25 percent of premium, a loss ratio over 75 percent represents an underwriting loss.

Premium and losses detailed below represent all General Liability experience since product liability experience, which is part of composite rated, loss rated, or large (a) rated accounts, has not been separately recorded. The Insurance Services Office estimates that the product liability portion of these figures is 40 percent.

Composite Rated, Loss Rated, and Large (a) Rated Classes

12/31/71	\$219,806,307	\$(314,999,176)	143.3%
12/31/72	306,146,483	(531,040,311)	173.5
12/31/73	345,931,985	(643,269,806)	186.0
12/31/74	331,154,141	(704,734,414)	212.8

* * *

In summary, over the past 10 years, the insurance industry and major writers of product liability business have seen their miscellaneous liability experience deteriorate and, based on the ISO data available, product liability experience, particularly for (a) rated products, has also deteriorated. Although more definitive industry-wide loss experience data are unavailable, individual insurers indicate that their experience to date has been equally unfavorable. The next section discusses the pricing actions insurance carriers have taken to deal with this situation.

B - CHANGES IN PRODUCT LIABILITY RATES

To stem deteriorating results, insurance carriers have revised their rates sharply. This section describes the product liability rate revisions filed by the Insurance Services Office for "manually" rated products and the progress being made in the individual states in obtaining approval for these rates. It then discusses actions taken by companies with regard to (a) rated products, including the eight classes of products selected for priority attention in this study.

MANUAL RATE CHANGES

Only in the past two years during the 13-year period 1963 to 1975 has ISO filed revisions with the states for product liability basic limits manual rates. The two occasions were in 1975 and 1976. During the 21-year period, 1955 to 1976, it has filed increased limits factors twice - in 1975 and 1976. (The last previous revisions in basic limits and increased limits factor rates were in 1963 and 1955, respectively.)

Revisions in manual rates are based almost entirely on changes in the frequency and severity of claims. Frequency is the number of claims divided by a specified exposure base (e.g., 200 claims per million dollars of product X in 1973 versus 250 claims for the same number of sales in 1974). Severity is the average size of a claim. During the 1972-1974 period the total number of claims incurred fell approximately 6 percent*. While this is not a precise measure of frequency, as it is not related to changes in the number of exposures at risk, to the extent that the exposure base remained reasonably constant during this period, it may be indicative. During the same period, severity increased over 180 percent - the average incurred bodily injury claim cost (including reserves) rose from approximately \$6,800 to \$19,500.**

The overall effect of ISO manual-rate revisions is shown in Exhibit B-1. These rates reflect the impact of individual revisions to all manually rated product classifications. Some classifications received no increase; a few classifications having favorable loss experience had their rates lowered.

* - 14,190 bodily injury claims in 1972 to 13,350 bodily injury claims in 1974.

** - Insurance Services Office. Data based on Total Incurred Losses (Basic Limits and Excess Limits Losses), including all loss adjustment expenses with reserves developed to an ultimate settlement basis. ISO's compilation of paid product liability claims shows an annual rate of increase of 29 percent over the 3-year period ending March 31, 1975.

Most, however, received substantial increases, such as a 400+ percent increase for household electrical equipment and a 550 percent increase for tools, dies, and jigs.

Exhibit B-1

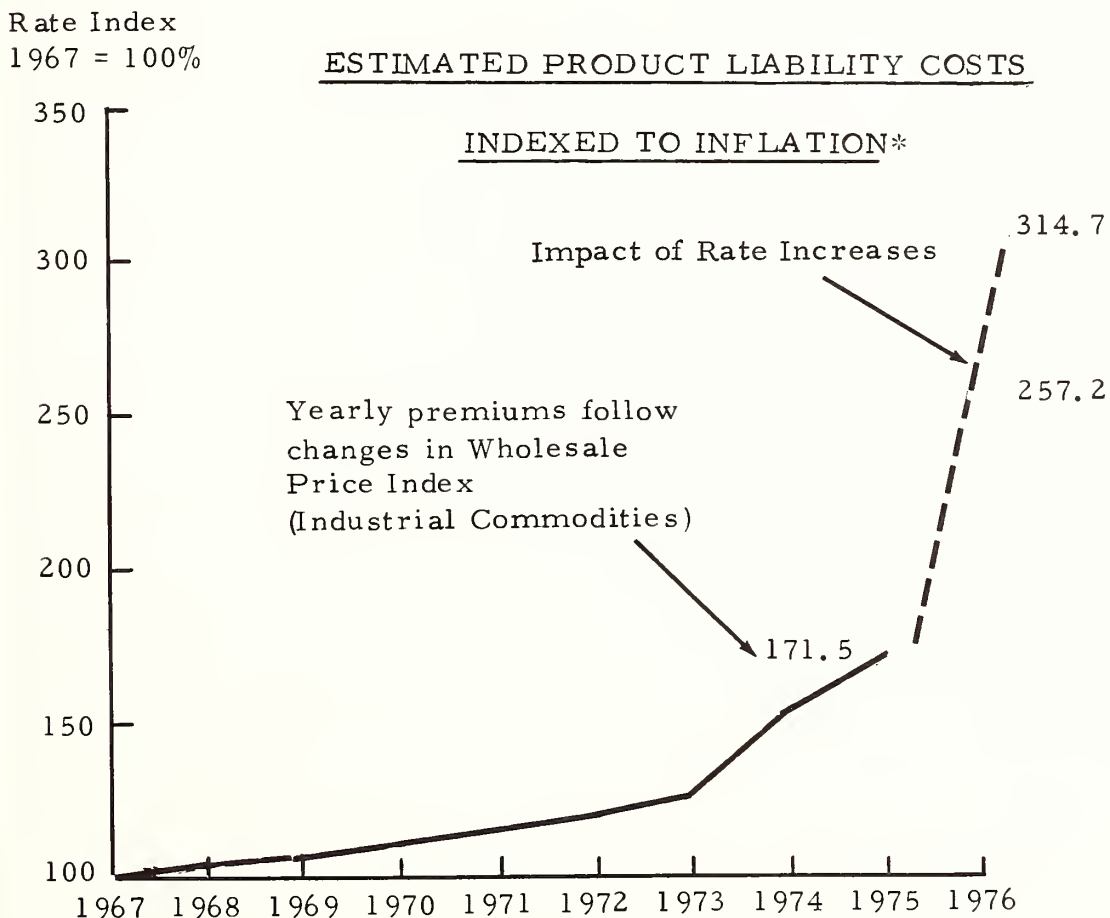
<u>Effect of ISO Revisions</u>	
<u>On Product Liability Premium Rates</u>	
	<u>Overall Percentage Increase*</u>
<u>Basic Limits</u>	
Bodily Injury (BI)	+83.5
Property Damage (PD)	+15.0
<u>Increased Limits Factors** (applied to manual and (a) rates)</u>	
Table B ("Standard" increased limits factor)	+200.3
Table A (Increased limits factors higher than "standard" applied to 90 of the 418 product classifications)	+ 74.5

For basic limits and increased limits factor rate revisions, ISO uses data on policy year basic limits premiums and incurred losses (including loss adjustment expenses). Incurred losses are "developed" to an ultimate cost basis - that is, increased by a factor that reflects the "maturing" that has historically occurred between the time a claim is evaluated and the time it is likely to be settled. For the 1975 rate revisions, experience data on claims incurred from December 1968 through December 1972 were used; for the 1976 revision, data were drawn from the period December 1969 through December 1973.

-
- * - Composite of ISO estimates of overall countrywide impact of rate revisions of 1975 and 1976 by type of increase. Basic limits rates are for BI limits of \$25,000 per occurrence and \$50,000 aggregate. PD limits are for \$5,000 per occurrence, \$25,000 for all damages.
 - ** - Excludes six states that use exception tables for bodily injury increased limits factors. Increased limits factors are applied against the basic limit rate to raise the limit of liability to the desired level. An individual factor is used to derive the applicable rate for each level of increased liability desired.

Exhibit B-2 shows how product liability premiums (solid line) have increased from 1967 through 1975 due to the impact of inflation on sales. The dotted line shows the estimated increase in manual rates following the rate revisions filed in 1975. Such increases in both exposures and rates have had a substantial impact on the cost of product liability insurance. It is important to remember that the rates shown in Exhibit B-3 are basic limits rates, not individual policy premiums. Insurers usually modify individual product rates upward or downward on the basis of actual loss experience of the risk overall as well as the underwriter's judgment of its individual characteristics.

Exhibit B-2



Sources: ISO Rate Activity Bulletins; U.S. Department of Labor, Bureau of Labor Statistics.

* - Based on analysis of 1975 and 1976 basic limits product liability rate filings. Analysis does not include (a) rated products and does not reflect impact of experience or schedule modifications or use of special rating plans.

The length of time between the ISO revisions is, in part, explained by the fact that rates are most frequently charged on a "per \$1,000 of sales" basis. Thus, when sales volume increases because of inflation or other factors, the premiums charged for insurance automatically increase. These increases, however, do not reflect increases in the frequency or severity of claims per unit of exposure, nor do they recognize that a change in sales volume may not adequately reflect changes in the amount of exposure being insured, a major consideration in the case of long-life products.

Manual rates and rate revisions are subject to state-by-state regulation. Approximately 70 percent of the states are prior approval states, which means that they require rates to be submitted to the State Insurance Department for final approval or disapproval. The remaining states are open competition states, requiring only that insurers maintain sufficient documentation and supporting data used in developing the rate.

As of October 1, 1976, the approval status of rate increases was as follows in the states.

	<u>Number of States Having Approved Rate Filing</u>
¶ April 1975 filing	
- Bodily injury	45 states
- Property damage	45 states
- Increased limits (BI)	46 states
¶ June 1976 filing	
- Bodily injury	31 states
- Increased limits	40 states

RATE CHANGES IN (a) RATED PRODUCT CATEGORIES

Although rates published by ISO for products in (a) rated categories have not been revised in the aggregate since 1974, when the majority of rates in this category were redefined to allow more precise classification, most insurance companies report that their (a) rated risks have received substantial rate and premium increases on a case-by-case basis. One company, for example, has raised all its (a) rates by 15 percent above the

guide (a) rate levels; another insurer has applied selective increases of between 100 to 300 percent to certain product categories. Many other carriers indicate that they have raised their (a) rates by roughly the same percentage as the increases posted in manually rated classifications in the same general categories.

Exhibit B-3 outlines the rate increases for (a) rated products in the eight target product categories as commented on by underwriters. Following this exhibit, we provide an analysis of actual increases in (a) rates in these eight product categories as disclosed by our underwriting file review.

Exhibit B-3

PRODUCT LIABILITY RATE REVISIONS
IN TARGET PRODUCT CLASSIFICATIONS

1974-1976

		Percentage Increase in Basic Limits Rates 1974-1976 for Manual Rates and Commentary From Underwriters on Application of (a) Rates	
	Manual or (a) Rate	<u>Bodily Injury</u>	<u>Property Damage</u>
<u>1. INDUSTRIAL MACHINERY</u>			
Tools - dies, jigs & fixtures (Mfg)	Manual	550%	8%
Metal working machinery & equipment (Mfg)	(a) }	"Rates up substantially for these eight categories - no estimates available"	
Hand tools - powered	(a)		
Const., mining & mat'l. handl.	(a)		
Ind. mach. & equip. (Mfg, NOC)	(a)		
Machinery (Mfg)	(a)		
Elec. gen. equip. (Mfg, NOC)	(a)		
Elec. equipment	(a)		
Engines & turbines	(a)		
<u>2. INDUSTRIAL GRINDING AND ABRASIVE PRODUCTS</u>			
Abrasive wheels	(a) }	"Very wide variation in increases depending on the individual risk. The better risks would have only moderate increases, but many would be up several fold"	
Abrasive (Mfg, NOC)	(a)		

Percentage Increase in
Basic Limits Rates
1974-1976 for Manual
Rates and Commentary
From Underwriters on
Application of (a) Rates

	Manual or (a) Rate	Bodily Injury	Property Damage
3. FERROUS AND NONFERROUS METAL CASTINGS			
Metals - smelt. or refin. (Mfg)	(a)	"Rates have been increased, but not as much as for risks in the industrial machinery classification"	
Struc. iron & steel - excluding erection (Mfg)	(a)		
Metals - proc. - no fab. metal prod. manufactured (Mfg)	(a)		
4. INDUSTRIAL CHEMICALS: ORGANIC AND INORGANIC			
Chemicals - ind. use (Mfg, NOC)	(a)	"Wide variation in (a) rate application, but most rates not up as high as the one manual classification listed"	
Chemicals (Mfg, NOC)	(a)		
Chemicals - herbicides (Mfg)	(a)		
Chemicals - pesticides (Mfg)	(a)		
Gases - in drums (Mfg, NOC)	(a)		
Gases - in steel cyl. (Mfg, NOC)	(a)		
Gases - in tank cars (Mfg, NOC)	(a)		
Dry ice (Mfg)	Manual	377 %	33%
5. AIRCRAFT COMPONENTS			
Airplane wheels	(a)	"Products in the eight (a) rated categories are written primarily by the aircraft pools; these rates have declined	
Aircraft (Mfg)	(a)		
Aircraft engines	(a)		
Elec. components	(a)		
Control instruments	(a)		
Instruments (NOC)	(a)		
Computers	(a)		
TV picture tubes	(a)		
Radio, TV, sound systems*	Manual	42%	0
Household TV*	Manual	42	0
6. AUTOMOBILE COMPONENTS AND TIRES			
Auto, bus, truck accessories, not operating parts (Mfg)	Manual	285%	7%
Auto, bus, truck inner tubes (Mfg)	Manual	35	300
Safety belts	Manual	N/A	N/A

* - This classification used for certain aircraft instrument components.

		Percentage Increase in Basic Limits Rates 1974-1976 for Manual Rates and Commentary From Underwriters on Application of (a) Rates	
	Manual or (a) Rate	<u>Bodily Injury</u>	<u>Property Damage</u>
6. AUTOMOBILE COMPONENTS AND TIRES (cont.)			
Auto acc. stores	Manual	600	43
Batteries - storage (Mfg)	Manual	367	45
Batteries - dry (Mfg)	Manual	400	50
Tires - auto, bus, truck	Manual	690	300
Tires - recap	Manual	281	51
Autos, buses, trucks (Mfg)	(a)	"Increases used for (a) rated products track closely with increases shown for manual rates in this category. (a) rate increases of 300-500 per cent not uncommon"	
Auto bodies - excl. trail. (Mfg)	(a)		
Auto, bus, truck brake lin. (Mfg)	(a)		
Camper & trailer bodies	(a)		
Bus bodies	(a)		
Trailers - mobile homes (Mfg)	(a)		
Truck bodies	(a)		
Auto parts (NOC)	(a)		
Motor vehicles - personal (Mfg)	(a)		
Engines & turbines	(a)		
7. MEDICAL DEVICES			
Elec. equip. - direct & indirect applic. to body (Mfg, NOC)	Manual	432%	32%
Med., den., hosp., surg, instr. excl. equip. & diag., treat. mach. (Mfg)	(a)	No commentary available for (a) rate practices	
Med., den., hosp., surg., equip. non-expendable (Mfg)	(a)		
Med., den., hosp., surg. supplies - expendable (Mfg)	(a)		
Med., den., surg. diag. or treat. mach. or devices (Mfg)	(a)		
Instr. - analy., calib., measur., testing or recording (Mfg)	(a)		
8. PHARMACEUTICALS			
Drugs, medicines, phar. prod. (Mfg) animal use only (NOC)	(a)	"Substantial increases in (a) rates"	
Drugs, medicines, phar. prod. (Mfg, NOC)	(a)		
Drugs - ground prod. (Mfg)	(a)		

To obtain a clearer picture of rate changes that have taken place in (a) rated categories, we analyzed underwriting files that contained identical product classifications from 1974 to 1975. Unfortunately, the small number of companies for which these data are available make the average increases shown less credible than would be the case if a larger sample had been available. Further, the wide variation in high and low increases points up the variation in individual risk pricing decisions. Finally, it should be noted that these findings are not representative of the total change in rates because the product liability policies that are composite rated, loss rated, and rated on a retrospective basis could not be included in this analysis since individual product rates are merged with rates for other coverages. These, of course, are the larger accounts, representing a fairly small percentage of the total policies but a significant proportion of the total premium. Therefore, although the data clearly show that rate increases have occurred, the stated average increases shown should be viewed with caution; the sample is far too small to be representative of the practices of the industry.

With the preceding caveats, our analysis showed that rates in the eight target classifications had experienced average rate increases ranging from a low of 19 percent to a high of 568 percent. The average rate increase for all products outside the eight target product classifications was 251 percent. Exhibit B-4 shows the average increases found, the number of companies in each category, and the range of rate increases.

Exhibit B-4

Rate Increases in (a) Rated Products

<u>Product Classification</u>	<u>Number of Companies Having Data Available</u>	<u>Low Range</u>	<u>Percent of Increase Average 1974-1975 Versus 1975-1976</u>	<u>High Range</u>
Industrial Machinery	27	<0%	244%	350-400%
Industrial Grinding and Abrasive Products	1	-	insufficient data	-
Ferrous and Nonferrous Metal Castings	13	0-50	19	100-150
Industrial Chemicals: Organic and Inorganic	4	0-50	78	100-150
Aircraft Components	-	-	insufficient data	-
Automobile Components	3	200-250	568	800-850
Medical Devices	2	<0	35	0-50
Pharmaceuticals	2	150-200	219	250-300
 All Other Product Categories	 765	 < 0	 251	 900-950

These average rate increases fell most heavily on manufacturers regardless of product category; retailer and wholesaler rates went up, but by a comparatively modest amount (Exhibit B-5).

Exhibit B-5

Average Percentage Rate Increase

	1974-1975 <u>vs. 1975-1976</u>
Manufacturers	320%
Retailers	39%
Wholesalers	29%

Finally, on an overall basis, rate increases were substantially greater for large companies than for small. It should be emphasized again that this analysis is for rate increases, which may or may not be indicative of upward or downward changes in total premium levels, as the final premium also depends on changes in exposures, limits of liability, application of experience and schedule modifications as described in Chapter 1. The average rate increase for large companies (over \$2.5 million in 1975 sales) was 510 percent; for small companies (under \$2.5 million sales), the average rate increase was only 39 percent.

Underwriters from our sample companies state that the difference between the average increase for large and small companies is to be expected since they believe that large companies are more likely to manufacture higher hazard (a) rated products, and they know the experience of (a) rated products has been far worse than that of manually rated as indicated by the data from ISO cited in Section A of this chapter. Data from the underwriting file analysis partially support their contention, showing that small companies had exclusively (a) rated products in 30 percent of the cases while large companies had exclusively (a) rated products in 55 percent of the cases.

In any event, these data suggest that sharp increases in product liability insurance rates have been applied to both large and small companies and that variation among companies is due more to the type of product than to the size of the company.

RESULTS OF AGENTS'
ASSOCIATION SURVEYS

Surveys conducted by both the Independent Insurance Agents of America and the National Association of Mutual Insurance Agents in September suggest that, according to the perceptions of the agents responding, average rate increases for product liability insurance during the past year have generally been in the range of 10 to 300 percent. As shown in Exhibit B-6, there is a considerable diversity of responses, which tends to support the finding that the increases vary widely, depending on the products involved.

The medians of the estimates provided by both groups of agents fall in the range of a 50 to 100 percent rate increase during the past year. Thus, these estimates from agents bear a reasonable relationship to the average rate increases filed for manually rated products during this period and the somewhat larger rate increase for (a) rated products estimated on the basis of our file reviews and interviews with insurers.

Exhibit B-6

Estimated Rate Increases - July 1975-July 1976

<u>Response</u>	<u>National Association of Mutual Agents</u>		<u>Independent Insurance Agents of America</u>	
	<u>Number</u>	<u>Percentage Response</u>	<u>Number</u>	<u>Percentage Response</u>
Don't know	24	15.0%	73	17.5%
No increase	6	3.7	2	0.5
In line with exposure	6	3.7	24	5.7
In line with inflation	7	4.4	25	6.0
10-49%	35	21.9	68	16.3
50-99%	19	11.9	65	15.6
100-300%	41	25.6	104	24.9
Over	14	8.7	29	6.9
No response	8	5.0	28	6.7
	160	100.0%	418	100.0%

C - SIGNIFICANCE OF RATE LEVELS

Because of widespread concern about product liability rates and their impact on the cost structures of individual firms and products, we estimated product liability rates as a percentage of sales for the 61 rating classifications in the eight target categories. In this section, we present the results of these estimates and comment on how they compare with results obtained from surveys of insureds by Gordon Associates and several trade associations.

RATES AS A PERCENTAGE OF SALES FOR TARGET PRODUCTS

In calculating the product liability rate as a percentage of sales, we used the following methodology:

1. Basic limits manual rates filed in the 1976 rate revisions were individually applied to each product classification where manual rates were applicable.
2. The current ISO-developed (a) rates were used as a basis for (a) rated products but were modified to reflect the actual pricing practices used in the sample companies in which an underwriting file analysis was conducted.
3. Increased limits factors were applied to both manual and (a) rates to raise the limit of liability to \$500,000 for bodily injury and property damage. This limit was the most frequently used, according to our underwriting file analysis.
4. The rate was calculated per \$100 of sales to yield the percentage rate for each product category.
5. Rates using an exposure base other than sales (i.e., number of products produced) were separately identified for the six classifications so rated.

Note that this calculation reflects the "raw rate." Although (a) rates have been increased to reflect the actual practices found, the calculations do not reflect the impact of experience or schedule rating plans or the influence of deductible programs.

The results of this analysis are summarized in Exhibit C-1 and presented in detail in Exhibit C-2, which also includes an illustration of the calculations. As the data indicate, when the rates as actually applied are calculated, 48 percent of product classifications have a rate which is less than 1 percent of sales.

Exhibit C-1

Applied Rates as a Percentage of Sales
For Target Product Categories

	Less than 0.5%	0.5%-1%	1% - 2%	2%-3%	3%-10%	Total*
Number of individual product classifications	15	8	17	5	3	48
Distribution	31.3	16.7	35.4	10.4	6.2	100%

* - Rates for seven classifications are not available; rates for an additional six classifications based on exposures other than sales. Percentage distribution is based on 48 product classifications included in sample.

Exhibit C-2

Product Liability RatesFor Target Product Categories

Calculations reflect basic limits rates and increased limits factors up to a limit of liability of \$500,000 for both bodily injury and property damage. Rates do not reflect application of experience or schedule modifications.

		Estimated Average Rate as a Percentage of Sales*
<u>1. INDUSTRIAL MACHINERY</u>	<u>ISO Product Code</u>	
Tools - dies, jigs & fixtures (Mfg)	35401	.52%
Metal working machinery & equipment (Mfg)	35402 (a)	3.12
Hand tools - powered	35202 (a)	2.70
Const, mining & mat'l. handl.	35302 (a)	1.70
Ind. mach. & equip. (NOC)	35500 (a)	2.90
Machinery (Mfg)	35992 (a)	2.90
Elec. gen. equip. (Mfg, NOC)	36102 (a)	1.10
Elec. equipment	36202 (a)	1.73
Engines & turbines	35100 (a)	1.10
 <u>2. INDUSTRIAL GRINDING & ABRASIVE PRODUCTS</u>		
Abrasive wheels	32902 (a)	1.42
Abrasives (Mfg, NOC)	32908 (a)	.30
 <u>3. FERROUS & NONFERROUS METAL CASTINGS</u>		
Metals - smelt. or refin. (Mfg)	33300 (a)	.17
Struc. iron & steel - excl. erection (Mfg)	33101 (a)	.39
Metals - proc. - no fab. metal prod. manufactured (Mfg)	34702 (a)	.37

* - (a) Rates shown on this list are based on the results of our underwriting file analysis supplemented by underwriters' estimates of average rates.

Exhibit C-2

4. INDUSTRIAL CHEMICALS: <u>ORGANIC & INORGANIC</u>	ISO Product Code	Estimated Average Rate as a <u>Percentage of Sales</u>
Chemicals - ind. use (Mfg, NOC)	28105 (a)	1.35
Chemicals (Mfg, NOC)	28905 (a)	.73
Chemicals - Herbicides (Mfg)	28703 (a)	1.58
Chemicals - Pesticides (Mfg)	28702 (a)	1.58
Gases - in drums (Mfg, NOC)	28102 (a)	(1.88 per number of filings)
Gases - in steel - cyl. (Mfg, NOC)	28107 (a)	(.48 per number of filings)
Gases - in tank cars (Mfg, NOC)	28108 (a)	(6.18 per number of filings)
Dry ice (Mfg)	28103	.13
5. <u>AIRCRAFT COMPONENTS</u>		
Airplane wheels	37201 (a)	N/A
Aircraft Mfg.	37202 (a)	N/A
Aircraft engines	37203 (a)	N/A
Radio, TV, sound systems	36511	.06
Elect. components	36703 (a)	Insufficient data ↑ ↓
Control instruments	38200 (a)	
Instruments (NOC)	38110 (a)	
Computers	35701 (a)	
TV picture tubes	36701	.44
Household TV	36512	.06
6. <u>AUTOMOBILE COMPONENTS AND TIRES</u>		
Auto, bus, truck accessories. not operating parts (Mfg)	37105	.42
Autos, buses, trucks (Mfg)	37101 (a)	.66/8.56
Auto bodies - excl. trail. (Mfg)	37102 (a)	.92
Auto, bus, truck brake lin. (Mfg)	37103 (a)	1.24
Auto, bus, truck inner tubes (Mfg)	30112	(.87 per number tubes)
Camper & trailer bodies	37113 (a)	1.14
Safety belts	37116	.44
Auto acc. stores	59351	.17
Bus bodies	37112 (a)	1.84
Auto acc. stores - wholesale	50121	.17
Trailers - mobile homes (Mfg)	37990 (a)	1.30
Truck bodies	37114 (a)	1.40
Auto parts (NOC)	37115 (a)	2.10
Batteries - storage (Mfg)	36902	.23
Batteries - dry (Mfg)	36901	.55
Motor vehicles (personal) (Mfg)	37111 (a)	1.44
Tires - auto, bus, truck	30111	(.52 per number tires)
Tires - recap	75301	(18.11 per number tires)
Engines & turbines	35100(a)	.90

Exhibit C-2

7. <u>MEDICAL DEVICES</u>	ISO <u>Product Code</u>	<u>Estimated Average Rate as a Percentage of Sales</u>
Med, den, hosp, surg. instru., excl. equip. & diag, treat. mach. (Mfg)	38401 (a)	.47
Med, den, hosp, surg. equip. non expendable (Mfg)	38402 (a)	1.39
Med, den, hosp, surg. supplies - expendable (Mfg)	38403 (a)	.25
Med, den, or surg. diag. or treat. mach. or devices (Mfg)	38404 (a)	1.79
Elec. equip. - direct & indirect applic. to body (Mfg, NOC)	36402	1.41
Instr. - analy, calib, measur, testing or recording (Mfg)	36101 (a)	.72
8. <u>PHARMACEUTICALS</u>		
Drugs, medicines, phar. prod. (Mfg) animal use only (NOC)	28301(a)	2.35
Drugs, medicines, phar. prod. (Mfg, NOC)	28302(a)	.87
Drugs - ground prod. (Mfg)	28303(a)	.48

Exhibit C - 2

ILLUSTRATIVE CALCULATION OF PRODUCT LIABILITY RATES

FOR TARGET PRODUCT CATEGORIES

Product Category and Code ¹	Basic Limits Rates ¹		BI Increased Limits Factor ² (3)	PD Increased Limits Factor ² (4)	Combined Rate (Col 1 x 3 + Col 2 x 4) (5)		Rate Per \$100 Sales (6)
	(1)	(2)					
Tools, dies, jigs and fixtures - Mfg. (35401 - manually rated)	BI	PD	3.34	5.5	5.159		.52
	1.10	.27					
Metal working machinery and equipment - Mfg. (35402s- (a) rated)	2.50	.50	4.00	5.5	12.75	Factor to reflect actual use of (a) rates 244%	3.12

1 - Source - Insurance Services Office - Product Liability Manual Rates in Columns (1) and (2) are per \$1,000 of sales.

2 - Factor used to increase the aggregate limit to \$500,000.

3 - Rate in Column (6) is per \$100 of sales.

DATA FROM INDUSTRY SURVEYS

Several of the surveys of insureds conducted during the past several months provide another perspective and a useful reference point to check the foregoing estimates of rates as a percentage of sales.

Rates levels for product liability insurance as a percentage of total sales have been reported in two surveys of industrial machinery firms as follows:

National Machine Tool Builders Association (NMTBA)

"Average machine builder pays on average 1.575% of gross sales in product liability premium . . . for metal forming equipment companies the average jumps to 3.0% of gross sales"

Machinery and Allied Products Institute (MAPI)

"Study of 117 responses to survey showed that .53% of gross sales was paid for product liability insurance"

Rate levels from these two surveys are consistent with our findings, which indicate that rates for industrial machinery range from a high of 3.12 percent of sales (metal working machinery and equipment) to a low of .52 percent of sales (tools - dies, jigs, and fixtures).

On the basis of its telephone survey and preliminary report on 233 firms * for the Department of Commerce, Gordon Associates reported:

"Costs for CGL coverage have increased from \$1.65 per \$1,000 sales in 1974 to \$3.61 per \$1,000 in 1975 for all firms in the sample. Product liability coverage is calculated to have increased from \$.73 per \$1,000 of sales in 1974 to \$3.49 per \$1,000 of sales in 1976."

"For all companies in the target product categories, product liability costs increased from \$1.46 per \$1,000 of sales in 1974 to \$5.66 per \$1,000 of sales in 1976."

* - Refer to Industry Contractor's final report for more complete data.

Although these rate levels are lower than those in our analyses, they are not directly comparable since our calculated rate levels do not include the impact of experience or schedule modifications, which could raise or lower the indicated rates. Further, our analysis focused on the rate level applicable only to the sales volume of an individual product. Thus, to the extent that a company sells a mix of products having a wide range of rates and has aggregated its data, or reports its product liability rate as a percentage of total company sales, the rates reported will tend to be lower than the rate levels reported in our analysis. More important, some 60 percent of the firms with over \$100 million sales, which represented over a third of the Gordon sample, had substantial deductibles, averaging nearly \$200,000 for bodily injury. This fact alone would dramatically reduce final rate levels.

Surveys of industrial firms by trade associations often include a mixture of hard data as well as estimates. For example:

- ¶ An insured may only be able to estimate his premium for products insurance in a policy where the products premium was not specifically identified but was combined on a composite basis with premiums for other liability exposures.
- ¶ The actual policy premium reported will differ depending on when such data is being reviewed
 - At policy inception, the premium can only be estimated based on an estimated level of exposure (sales) and will not be final until after the policy period (at audit).
 - If the policy is experience rated under a retrospective formula, the actual premium would not be finalized until several years after the policy period when all claims included in the plan have been closed (with or without payment).
 - Policy dividends from insurance carriers are not paid until the end of a policy period.

D - OUTLOOK FOR FUTURE RATE INCREASES

In order to make any reasonable estimate concerning what is likely to happen to product liability insurance rates in the future, we need to understand the principal causes of the recent rate increases.

This section summarizes the views of the many insurance and reinsurance executives, agents, and brokers we contacted during our study regarding the causes of the sudden jump in the cost of product liability insurance and then presents our views on the outlook for future rate increases.

MAJOR CAUSES OF CHANGE

Throughout our interviews, industry spokesmen repeatedly cited two major underlying causes of the deteriorating underwriting results:

1. Erosions in the traditional defenses available to a product manufacturer, thereby expanding his liability
2. Growing awareness of consumers of their rights under the law, which has increased the number of claims being filed.

Together, these two factors are viewed as the primary causes of the increase in frequency of product liability claims and the sharp rise in their severity that produce a need for substantial rate increases.

Other conditions seen as contributing to the sudden increase in product liability insurance costs are:

1. Inadequate product liability rates in the past. Loss experience was not closely monitored, due in part to procedure of collecting data for only the low-hazard product categories. Therefore, the industry was late in recognizing the extent of the problem and was not equipped to provide rating guidance for problem products.
2. Large number of intangible factors influencing the overall quality and loss potential of risks which cannot be readily rated, such as the existence of long-life products from which claims may arise.

3. General inflation, which has affected the cost of all settlements, particularly those where extended litigation is involved.

Another factor, the reduced surplus position of many insurers, as measured by the premium-to-surplus ratios, has been cited by some as contributing to escalating product-liability premiums. The premium-to-surplus ratio measures a company's financial strength - that is, the adequacy of its cushion for absorbing above-average and unexpected losses. The higher the ratio, the more risk the company runs in relation to the surplus available to absorb unexpected losses. Over the period 1966 to 1975, the average of premium-to-surplus ratio for the top 10 writers of miscellaneous liability has grown from 1.60 to 3.74. In other words, in 1966, there was \$1.00 of surplus to support every \$1.60 of premium; in 1975, \$1.00 of surplus had to support more than twice that amount. Exhibit D-1 shows the year-to-year changes in this ratio.

Exhibit D-1

Net Premium-to-Surplus Ratio

(Excluding Value of Life Insurance Subsidiaries)

	<u>1966</u>	<u>1968</u>	<u>1970</u>	<u>1972</u>	<u>1974</u>	<u>1975</u>
10 largest writers of miscellaneous liability insurance	1.60	1.79	2.46	1.82	4.84	3.74
All industry	1.67	1.60	2.09	1.63	2.74	2.50

Source: Best's Aggregates and Averages, Best's Insurance Reports, Best's Insurance Securities Research Service, McKinsey calculations.

Generally, insurance companies try to maintain a premium-to-surplus ratio of less than 3 to 1. Thus, when the ratio is higher, there is a constraint on the total premium dollars that may be underwritten for all lines, regardless of the potential profitability of a specific line. However, the surplus position of companies does not enter into the calculations made by ISO to determine manual rate revisions.

Underwriting managers from our sample companies indicated that the premium-to-surplus ratio was a factor that limited their ability to underwrite insurance overall; further, that the ratio particularly influenced their willingness to underwrite such business as product liability, where profitability is highly uncertain. Finally, they indicated that even though the surplus squeeze might be eased in the short term, they could not see it as having an impact on future rates.

EXPECTED RATE TRENDS

Most insurance executives agree that the rate increases achieved in the 1974-1976 period were substantial and overdue. None, however, said that the industry has reached a position of full rate adequacy. Since no actuarial projections are possible at this point for high-hazard products, the executives based their opinions on the following: (1) continued uncertainty about the legal defenses available to their policyholders, and (2) concern that current trends in claim severity will escalate the costs of claims already reported but not yet settled.

A third factor, less frequently cited, was the inadequacy of the current rate-making system, particularly as it applies to the development of (a) rates. This situation will be substantially improved in late 1977, when ISO plans to publish experience-based rates for products that are now in (a) rated categories.

Our prognosis is that basic limits rates will continue to rise, but: (1) the increases will not be nearly as large as those recently filed, and (2) they will be selective, reflecting problems associated with specific product classifications.



CHAPTER 3
ASSESSING THE RESPONSE OF
EXISTING INSURANCE MECHANISMS TO
PRODUCT LIABILITY PROBLEMS

CHAPTER SUMMARY

This chapter presents the findings and conclusions growing out of our review of the response being made by the insurance community to the emerging product liability crisis. As in the other chapters, these findings are based partly on underwriting file review conducted in six large insurance companies and on interviews with insurance and reinsurance executives and with insurance brokers and managers of captive insurance companies. In addition, since one of our objectives was to identify breakdowns in the insurance mechanism in the form of unavailability of product liability insurance or significant restrictions on the coverage, we drew on seven other sources to gain the perspective of the insurance buyer:

1. A telephone survey of 350 companies and preliminary analysis of 223 of these responses developed during October for the Department of Commerce by Gordon Associates
2. A mail survey, which generated 85 responses, conducted in May and June by RETORT, Inc., an organization of manufacturers formed to promote "reason and equity in tort"
3. A mail survey of insurance buyers conducted by the Risk and Insurance Management Society, Inc. (RIMS) in June and July which pulled approximately 500 responses
4. Surveys conducted by 12 trade associations among their members during the past year
5. Information supplied directly to the Department of Commerce, the Senate Select Small Business Committee, and the Inter-Agency Task Force

6. Mail surveys conducted by two associations of insurance agents in September: the Independent Insurance Agents of America, which generated 418 responses; and the National Association of Mutual Insurance Agents, which generated 163 responses
7. Information on complaints and use of surplus lines carriers reported to us by six state insurance departments at the request of the National Association of Insurance Commissioners central office.

The major findings and conclusions coming out of this review are the following:

- ¶ Many small manufacturing firms are having trouble obtaining satisfactory coverage at a price they consider reasonable; however, after considerable effort, we have been able to identify by name only 62 firms that previously had coverage but are now going without it. Additionally, 110 unnamed firms were reported by trade associations. Thus, the availability of product liability insurance cannot at this point be fairly characterized as a severe problem, in our judgment. Certainly, the problem is not widespread.
- ¶ Although insurers are imposing some limitations on coverage, such as higher deductibles and reduced coverage limits, these practices are not common. Rather, insurers are reacting to soaring product liability claims costs by increasing premiums or refusing to renew the product liability coverage altogether.
- ¶ When a line of business is "troubled," the insurance community sometimes responds by turning to facultative reinsurance or surplus lines (nonadmitted) carriers, and the insured to risk retention programs. Although there has been some increase in the use of facultative reinsurance and risk retention programs, resorting to the surplus lines market appears to be the more common response to the availability problem.
- ¶ Most available evidence suggests that the problem of availability and affordability of product liability coverage is concentrated in smaller firms manufacturing products that underwriters consider especially hazardous. Larger firms have more leverage in the insurance market, are more financially able to share the risk through deductibles or retrospective rating plans, and, if they have diversified product lines, are less likely to be vulnerable.

¶ Among the eight product categories selected for particular attention, all are experiencing cost problems in varying degrees, and the industrial machinery group is having the most severe availability problems. Two of the categories - industrial grinding wheels and aircraft components - are much better off than the others because of efforts begun a number of years ago to control product liability losses and use specialists to handle product liability claims.

The balance of this chapter discusses our findings and conclusions in more detail. It is organized around the following sections:

- A. The Problem of Availability and Affordability
- B. Mechanisms Used To Respond to Availability Problems
- C. Patterns of Response for Selected Product Categories.

A - THE PROBLEM OF
AVAILABILITY AND AFFORDABILITY

While there is little question that firms manufacturing certain types of products are experiencing difficulty in obtaining product liability coverage, it has proved extremely difficult to obtain a clear, factual picture of the extent of the availability and affordability problem. The reasons for this difficulty are:

1. In many cases, both the firms and their insurance agents are reluctant to report that they are without coverage for fear this will jeopardize their relationships with customers.
2. It is difficult to define precisely what constitutes an availability problem. There appear to be relatively few cases where an intensive search of the insurance market by the buyer's agent or broker does not yield at least one quote. However, the insurance buyer may not be able to obtain the limits of coverage he feels he needs, or he may be asked to accept a very high deductible, or he may be given a quote so high that it appears to be the underwriter's way of saying no. On the other hand, some firms without primary coverage may have elected to go this route based on a sound analysis of their situation, and others who report an availability problem may not have explored the insurance market very thoroughly.
3. The problem of evaluating affordability is even more complex. An increase in product liability premiums of 500 percent may not be unaffordable if the previous premium amounted to only 0.1 percent of sales, which is not uncommon, since the amount of the increase would be only 0.5 percent of sales. Similarly, a product liability premium amounting to 10 percent of sales would not be unaffordable if the previous year's premium had been 9 percent. The best way of gauging affordability in our judgment is to determine the increase in premium and then calculate the percentage of sales it represents. If this

increase is significant as a percent of sales, there could well be a serious affordability problem, depending on the size, financial strength, profitability, and competitive position of the firm.

4. Our sources of information on the extent of the problem are a variety of surveys conducted by others and data on complaints filed with state insurance departments. Particularly where these surveys have been conducted by mail, there is considerable uncertainty as to how some of the questions were interpreted by respondents. In addition, these surveys have been conducted at different times, and the availability picture is in constant flux: A firm that was without coverage one month may have obtained it the next.

Despite these caveats, since the question, "How serious is the problem of availability and affordability of product liability insurance?" is so crucial to assessing the need for changes in the legal and insurance mechanisms to deal with the problem, we summarize below the information that we have received on this issue from various sources. These are:

1. McKinsey interviews and underwriting file review
2. Gordon Associates telephone survey (337 manufacturers)
3. RETORT, Inc., survey (85 manufacturers)
4. Risk Insurance Management Society survey (over 500 insurance buyers)
5. Industry trade association surveys
6. Information supplied directly to the Federal Government by companies experiencing difficulties
7. Agents' association surveys
8. Telephoned reports from five state insurance departments.

In addition, based principally on our underwriting file review and interviews with insurance underwriters, agents, and brokers, we discuss the extent to which various types of coverage limitations have been used by insurers in an effort to limit the risk they are assuming.

SURVEY FINDINGS CONCERNING AVAILABILITY OF PRODUCT LIABILITY INSURANCE

Since the sources of information on the product liability insurance problem vary so widely, we will briefly describe the relevant findings from each source.

McKinsey Interviews

Hard information on availability problems was impossible to obtain from our file review and interviews with insurance underwriters, agents, and brokers. Underwriters simply do not know whether a policyholder they have refused to renew has been able to obtain coverage. Brokers are more likely to know of availability problems but are understandably reluctant to divulge the names of clients that have "gone bare" - i. e., are going without needed coverage. However, insurance underwriters did indicate that, for certain categories of products, they are providing product liability coverage only on a very selective basis. Exhibit A-1 presents a list of products most frequently cited by underwriters, brokers, and agents as being difficult to write or place.

This reluctance to write product liability insurance stems from two key factors:

1. A conviction that trends in the tort litigation system have made product liability losses highly unpredictable and therefore have made certain highly loss-prone products extremely difficult to insure.
2. A need to contain overall writings in some companies to avoid increasing premium-to-surplus ratios, which could indicate a deteriorating financial position.

Gordon Associates Survey for The Department of Commerce

Gordon Associates, the industry contractor engaged in connection with the Product Liability Task Force study, conducted a survey of manufacturers using mailed questionnaires followed by telephone interviews during October and November 1976, focusing on known problem product groups and on both large and small firms. Of the 223 respondents analyzed in this preliminary survey as of October 20, 1976, 20 (or 9 percent) indicated that they do not have product liability coverage even though they feel they need it. Of these,

"WATCH LIST" PRODUCTS FREQUENTLY CITED

	Eight Product Categories	All Others
Industrial products	Acetylene gas Airplane wheels Calcium carbide Carbonic acid Liquefied gas Organic chemicals Pesticides PVC* Pressing machines Pyroxylin Stamping machines Steam turbines	Animal feed Cranes Gas equipment Hydraulic hoses Ladders Precision instruments Scaffolding Waterworks
Consumer products	Ethical drugs Hair treatment products Intrauterine devices Medical life support systems Motorcycle helmets Oral contraceptives Recapped tires Surgical instruments Vaporizers	Aerosol containers Antifreeze Awnings Baby furniture Boats Boat trailers Food Lawnmowers Plastic handles Salad dressing Sports equipment Sprinklers Tents Toys Trailer homes

* - Polyvinyl chloride

11 reported that coverage was "too expensive," 3 said they could not get a quotation, 6 gave other reasons. Twelve of the 20 companies without coverage had annual sales of less than \$2.5 million, 4 had sales between \$2.5 million and \$100 million, and 4 had sales of over \$100 million.

RETORT, Inc., Survey*

The RETORT survey questionnaires were mailed to approximately 500 manufacturers during the May-July period of this year. One question asked was, "Are you experiencing difficulty in securing product liability insurance coverage at any price?" Twenty-seven of the 85 respondents (31.8 percent) answered "yes" to this question. Of these, nine are "without coverage" because they could not secure a quotation, and seven have no coverage because the coverage they were offered was priced too high. Examination of the responses of the remaining 11 indicates that they have coverage or were offered a quotation. Of the 16 companies without coverage, 6 reported sales under \$2.5 million; 3 reported sales from \$2.5 million to \$50 million; the others did not answer this question.

Industry classifications of the 16 companies are as follows.

Industrial machinery manufacturing	4
Industrial machinery sales	1
Industrial chemicals	3
Research and development/testing labs	3
Ladder manufacturing	1
Gym equipment	1
Horse care products	1
New upholstered furniture	1
Aluminum ladders	<u>1</u>
	16

* - Surveys by trade groups may reflect unintended biases. For example, the respondent may be aware of only a portion of his losses. He may not know what reserves his insurer has established for losses that have been paid. He may not know that an additional 42 percent (according to a preliminary analysis of 7,800 closed claims by ISO) of each paid claim dollar is paid for loss adjustment expenses. Finally, he may be unable to distinguish product liability from general liability premiums.

Risk and Insurance Management Society Survey

The RIMS survey asked, "Have any of your company's product liability carriers, within the past 2 years, canceled coverage or refused to renew either primary or excess coverage?" The RIMS results indicate that 11.5 percent of the approximately 300 respondents have had some primary coverage canceled and nearly 19 percent had a portion of their excess coverage canceled. However, over 90 percent of these cancellations affected less than 50 percent of the coverage in force at the time. The RIMS survey does not reveal how many of these companies were unable to replace their canceled coverage with another carrier. Over half of the RIMS survey respondents had sales of more than \$250 million.

Trade Association Surveys

During 1976, a number of trade associations surveyed their membership concerning their experiences with product liability insurance. Exhibit A-2 summarizes the responses of these association members on the question of the availability of primary product liability coverage for those surveys made available to the Task Force. No supplementary data were provided regarding the size of the companies indicated to be without coverage.

Information Supplied Directly To the Federal Government

Throughout the course of this project, individual companies experiencing problems in obtaining product liability coverage or coverage at a price they considered affordable wrote to the Inter-Agency Task Force, the Department of Commerce, or the Senate Select Committee on Small Business. In total, 34 companies wrote to comment on their particular problems. Nine of these companies were machine tool manufacturers, the remainder were distributed over 17 diverse industry groups. Company size could not be determined. Some of the letters provided the details of their premium and loss experience, prior carriers, and the steps that had been taken in an attempt to secure coverage. Most correspondence, however, simply stated the problem - usually "unavailable at any price" or "unaffordable... quote is too high."

TRADE ASSOCIATION SURVEYSSUMMARIES OF MEMBERS WITHOUT COVERAGE

<u>Association</u>	<u>Number Surveyed</u>	<u>Number of Responses</u>	<u>Without Coverage</u>
Machinery and Allied Products Institute (MAPI)	NA	188	8
American Textile Machinery Association	121	49	0
Automotive Parts and Accessories Association, Inc.	1, 100	182	10
Water and Wastewater Equipment Manufacturers	260	43	3
Grinding Wheel Institute	NA	NA	NA
National Machine Tool Builders Association	NA	60	NA
Woodworking Machinery Manufacturers Association	NA	88	5
Machinery Dealers National Association	365	247	67
Massachusetts Area Council of Independent Testing Labs, Inc.	NA	7	"Most of the 7"
Farm and Industrial Equipment Institute	NA	NA	"10 companies up against the wall"
Health Industry Manufacturers Association	160	48	0
Railway Progress Institute	86	11	NA

Agents' Association Surveys

Both the Independent Insurance Agents of America (ILAA) survey and the National Association of Mutual Insurance Agents (NAMIA) survey asked insurance agents, "How many of your clients: (1) are commercial accounts; (2) have a product liability exposure; (3) have product liability insurance (primary and/or excess); and (4) have a product liability exposure but no product liability insurance?" Since an initial tabulation of responses suggests that a number of respondents may have misinterpreted this question, we feel it could be misleading to cite the survey results on this point until the validity of the questionable responses has been verified.

Reports From State Insurance Departments

Six state insurance departments, at the request of the central office of the National Association of Insurance Commissioners, reviewed their records of complaints during the past year and reported to us by telephone the best indications they could obtain regarding the number of complaints received concerning the availability or affordability of product liability insurance. The New York and Pennsylvania Insurance Departments reported 11 complaints each concerning cancellation or nonrenewal of product liability coverage. Illinois was unable to segregate product liability insurance but reported 10 complaints concerning general liability cancellation or nonrenewal. The California department estimated that it had received 35 to 40 complaints concerning product liability cost and availability over the past year. Texas estimated approximately 20 complaints concerning product liability costs during the last half of 1976. Louisiana reported that it had received no complaints concerning availability of product liability insurance. In general, the opinions expressed by those reporting were that product liability insurance availability is not now a severe problem but could become one.

COVERAGE LIMITATIONS IMPOSED BY INSURERS

Potentially, insurers could, and occasionally do, apply a number of limitations that are aimed at reducing their overall exposure to product losses. These limitations include: (1) decreasing the limits of liability offered; (2) writing coverage only in excess of a mandatory retention by the policyholder; (3) restricting of coverage to existing products only; and (4) including of the defense costs within the policy limits of liability. Each of these approaches involves a shift of potential liability to the policyholder or another insurer.

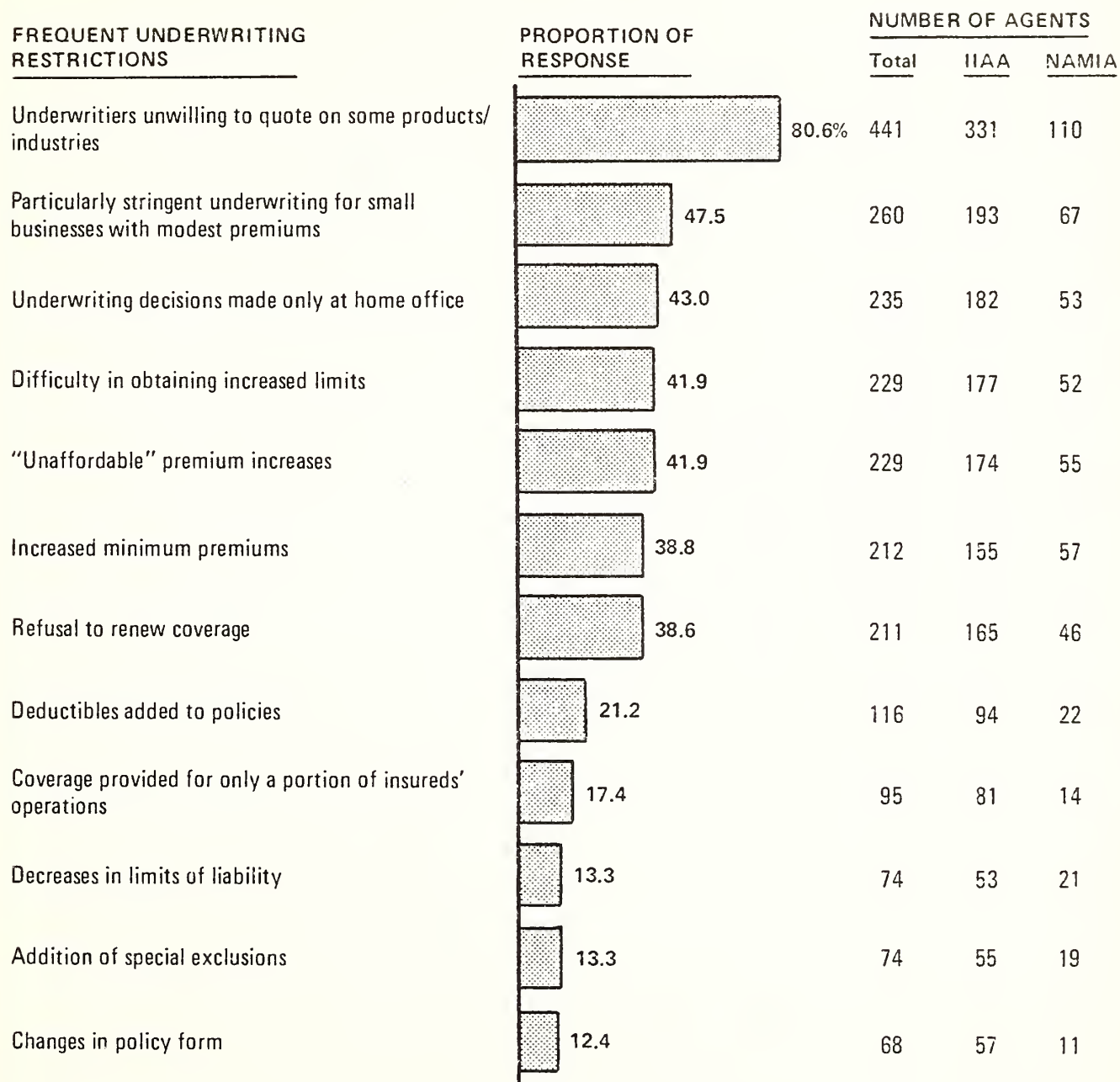
As described in Chapter 1, our review of 3,000 underwriting files indicated that deductibles were used in only 3 percent of the cases. Interviews with underwriters indicated that there may be a somewhat greater tendency to resist raising liability limits. Coverage restrictions, such as covering existing products only and including defense costs within the limits of liability, are very rare.

During our interviews, we learned that, while underwriters have become more selective in their underwriting of product liability and have increased product liability premiums over the past 5 years, with some exceptions,* they have been reluctant to impose coverage restrictions on their policyholders for two reasons. First, underwriters realize that, by withholding needed coverage, they are forcing their insureds to expose themselves to a serious financial threat. This lack of customer satisfaction cannot lead to a satisfactory relationship. Thus, if they quote at all, insurers prefer to offer the broad coverage the policyholder needs. Second, the policyholder is usually able to find a less reluctant underwriter who, for some premium, will agree to provide a more acceptable level of coverage.

Thus, insurers do not usually restrict product liability coverage by amending the policy wording. In fact, the IIAA survey indicates that restricting coverage by policy wording does not rank among the top 10 practices followed by underwriters who have been restricting their writing of product liability insurance since January 1975. Exhibit A-3 displays the underwriting restrictions most frequently used, according to the IIAA and NAMIA Product Liability Questionnaires.

* - The most significant exceptions mentioned were that certain pharmaceutical products and some industrial chemicals and medical devices are routinely excluded from the manufacturers' master liability policy due to the exceptionally large loss potential they represent. These products are often insured separately to enable: (1) insurers to write lower limits of liability than they would normally offer for the rest of the product line; (2) the policyholder to account separately for the premiums and losses generated by these products to reflect these costs in the product's price; (3) the policyholder to retain relatively more of the losses generated by these products than for the rest of the product line.

FREQUENT PRODUCT LIABILITY UNDERWRITING RESTRICTIONS REPORTED BY AGENTS



Sources: IIAA and NAMIA 1976 "Products Liability Questionnaire"
responses — total responses 547; IIAA (418) and NAMIA (129).

SUMMARY

In total, we have been able to identify by name 74 firms that are without product liability insurance coverage they feel they need, either because it was unavailable or because they felt they could not afford it. These are a composite of firms identified in the Gordon survey, the RETORT survey, and firms that contacted the Department of Commerce or Senate Select Small Business Committee directly.

Trade association surveys reported a total of 110 firms that are without coverage. These firms are unidentified. Thus, we have no way of knowing the extent to which the 74 that have been identified by name are included in the 110.

At this point, although the availability problem cannot be fairly characterized as "severe" at this point, it is not insignificant.

The problem of coverage limitations is harder to pin down than the problem of absolute unavailability. However, our interviews suggest that limiting coverage is not a widespread practice on the part of insurers.

B - MECHANISMS USED TO RESPOND

TO AVAILABILITY PROBLEMS

Traditionally, insurers and insureds have resorted to a variety of approaches in dealing with the problem of either providing or obtaining adequate coverage when the "market is tight" in a "troubled" line of business. These are the increased use of:

1. Reinsurance
2. Surplus lines (nonadmitted) carriers
3. Risk retention programs.

Although we discussed reinsurance and surplus lines carriers briefly in Chapter 1, because of their importance as responses to availability problems, we discuss them in more detail here. We also briefly describe the theory and practice of the use of risk retention.

There is no comprehensive information available on the use of each of these three approaches. In discussing each approach, however, we will cite the fragmentary information we were able to obtain that provides some indication of their use in connection with the product liability insurance availability problem.

REINSURANCE: ROLE DEFINITION AND COST IMPLICATIONS

The role of the reinsurer is mainly to make available additional risk capital to the policyholders of its client, the insurance company. As explained in Chapter 1, this risk-spreading arrangement between the insurer and his reinsurers normally does not involve the policyholder or the producer directly. As far as the individual policyholder knows, the entire policy is underwritten by the insurer. In fact, the insurer pays any losses in accordance with the policy terms and, afterward, collects from the

reinsurers. Reinsurers bring a considerable degree of stability to the insurance market, as they provide an orderly way for policyholders to purchase policies with very large limits of liability without threatening the financial vitality of any one insurance or reinsurance company.

It is important to understand that the activities of reinsurers are not regulated in the same way the affairs of insurers are monitored. They are free to use the policy forms they feel are most appropriate and to charge the rates the market will allow. This flexibility permits reinsurers to react very quickly to changes in the insurance market. Thus, they are often at the "leading edge" of the market. As loss costs rise unpredictably, insurers turn to the facultative market (reinsurance arranged on a risk-by-risk basis rather than for an entire line of business) in order to continue to provide coverage to the policyholder. This risk sharing limits the loss potential on the individual risk involved. Reinsurers, in turn, share the risks they assume with other reinsurers. For example, a large reinsurer may offer as much as \$5 million but keep only \$500,000 net and pass off \$4.5 million to others. Thus, each risk can be, and often is, assumed by a vast network of insurers.

During our interviews with reinsurers, we learned that their volume of facultative business tends to increase whenever their customers (the insurers) are particularly worried about a given line of business or class of risk. Thus, during 1975, they wrote a large volume of facultative medical malpractice coverage. In previous years, aircraft products and pharmaceutical risks passed through similar phases. As the loss-cost patterns become more stable, insurers write these exposures more willingly and the reinsurers see a drop in the demand for their risk-bearing capacity.

Although our underwriting file reviews showed facultative reinsurance on only 5 percent of the policies reviewed, several of the reinsurers we interviewed indicated that they are writing far more product liability coverage today than 5 years ago. This coverage is being written primarily by the traditional treaty method (reinsurance for an entire line of business - e.g., miscellaneous liability), but an increasing amount is being written through facultative arrangements. Some reinsurers are even offering their capacity to U.S.-based excess and surplus lines insurers and to "captive" insurance companies.

The cost of a facultative reinsurance arrangement is negotiated for each risk. This cost, including an "overriding" commission paid by the reinsurer to the insurance company, is passed on to the policyholder as an indistinguishable part of his policy premium. The premiums vary widely, depending on the amount of coverage being offered, the size of the exposure, and the degree of risk involved. If the reinsurance coverage begins at a level low enough to involve reinsurers in probable losses (referred to as the "working layer," a layer which reinsurers are often reluctant to cover for product liability), they will set their premiums in a manner similar to that followed by primary insurance companies. This process, as explained in Chapters 1 and 2, is highly judgmental, reflecting loss history, discontinued products, product lifetime, quality control efforts, and changes in the legal environment.

SURPLUS LINES INSURERS: ROLE DEFINITION AND COST IMPLICATIONS

Surplus lines insurers and reinsurers are not admitted to write regular insurance business in the states in which the policyholder is located. These nonadmitted insurers and reinsurers emerged many years ago as a supplement to the traditional market. Their purpose is to write the coverage and limits that the admitted companies, companies licensed to do business in the policyholder's state, feel they cannot absorb. These nonadmitted insurers have also gained a reputation for writing unique and unusual forms of coverage. However, as these coverages become better known and the loss costs become more predictable, admitted insurers tend to "take over" the market for these coverages. This is easily done as the "surplus lines laws" that regulate the affairs of nonadmitted insurers (each state has passed a surplus lines law; no two are the same) generally require that coverage written by these insurers first be refused by admitted companies. These laws place the primary regulatory burden upon the surplus lines broker. Generally, a broker who wants or needs to do business with a nonadmitted insurer must first have a special license. As he is responsible for payment of the premium tax (a duty normally performed by the admitted insurer), he most often posts a bond guaranteeing payment. Non-U.S.-based surplus lines insurers (called alien insurers) such as Lloyds of London must meet specific trust fund requirements set by the surplus lines statutes in some states and must be on the insurance commissioner's "approved" list of insurers. Another distinctive surplus lines regulatory feature is that surplus lines brokers must file affidavits within a prescribed time period, such as 30 days, after procuring the coverage. These documents usually state that the placement was not made for a lower rate than that available from admitted insurers and that a diligent effort was made to use an admitted insurer.

Exhibit B-1 shows the amount of all-lines premium written by surplus lines companies during the 1972-1974 period. Richard E. Willey, a noted surplus lines specialist, estimated that the total, all-lines volume for 1975 was approximately \$600 million. This estimated increase of approximately 50 percent over 1974 corresponds very closely with figures provided to us by telephone by the state insurance departments of California, Illinois, Louisiana, New York, Pennsylvania, and Texas.

Mr. Willey also estimated that 60 percent of the 1975 business was miscellaneous liability, of which about 15 percent (approximately \$55 million) was product liability. He believes that the surplus lines market is divided as follows.

<u>Type of Insurer</u>	<u>Proportion Of Market</u>
1. English companies	37%
2. U.S. surplus lines companies	28
3. Surplus lines departments of admitted companies	16
4. Surplus lines companies owned by surplus lines brokers	19

Another significant characteristic of the surplus lines market is that surplus lines insurers are often prohibited from charging a lower rate than that available from licensed insurers. Thus, coverage available from these companies is often offered at a multiple of the premium charged by admitted insurers. Surplus lines insurers can charge these higher premiums as their policyholders have exposures which cannot be absorbed in the admitted market; thus, if they want coverage, they must pay the premiums the surplus lines insurers want.

The consequence of this pricing practice is that business flows to the surplus lines markets during periods when primary insurers are cutting back their writings or avoiding certain classes of risks. Thus, in 1975, the surplus lines markets reportedly absorbed large increments of medical malpractice coverage. This is reported to have decreased to some extent in 1976 and to have been replaced with an increased volume of product liability coverage. In fact, Mr. Willey feels that product premium might grow from its current rate of 15 percent of miscellaneous liability

SURPLUS LINE PREMIUMS

REPORTED BY MAJOR STATE INSURANCE DEPARTMENTS*

Top 10 States (1974)	Premiums (\$ Million)			
	1972	1973	1974	1975 Est.
California	\$ 38.4	\$ 41.1	\$ 54.0	
Texas	30.9	35.9	48.5	
Louisiana	44.1	43.2	44.9	
New York	50.6	44.3	43.6	
Illinois	21.3	25.9	22.8	
Florida	15.3	18.4	20.8	
New Jersey	18.1**	19.7	18.1	
Pennsylvania	12.2	10.4	16.4	
Alaska	7.2	5.1	12.8	
Georgia	5.9	6.9	8.8	
All other states	<u>79.3</u>	<u>97.7</u>	<u>114.7</u>	
Total	\$323.3	\$348.6	\$405.4	\$600.0
% increase		7.8%	16.3%	48.0%

* - Note: The overall size of the surplus lines market is estimated to be over \$1 billion. The difference between the taxable premiums shown above and this estimate can be attributed to business written by non-licensed surplus lines brokers.

** - 1971 premium.

Source: National Underwriter. Richard E. Willey articles, December 14, 1973, December 13, 1974, December 12, 1975.

to 25 percent by 1977. Unfortunately, none of the state insurance departments was able to provide us with specific information on surplus lines activity for product liability risks in 1976. However, several did comment that they believe that there has been a sharp increase in the involvement of surplus lines carriers in product liability business.

RISK RETENTION: ROLE DEFINITION AND COST IMPLICATIONS

Risks of loss can either be transferred to an insurer or retained. Retention can either be voluntary or involuntary. Voluntary risk retention can be a sound financial strategy, particularly when the loss costs involved are relatively predictable from period to period and when the retaining organization has the necessary financial and administrative resources to cover the losses effectively and efficiently. Thus, risk retention has been used to a much greater extent to cover property risks than general liability risks.

Even when the necessary resources are present, some organizations still prefer to insure their risks of loss due either to inertia or to a low-risk-taking propensity or to the fact that loss reserves established to fund risk retention programs are not tax deductible. Voluntary risk retention is usually partial. Most organizations purchase at least some excess coverage to protect their earnings from a large surprise loss. A key issue for these firms is to determine at what point risk retention is no longer financially prudent.

Involuntary risk retention occurs when insurers are unwilling to provide needed coverage. Insurers may require some level of risk retention to avoid small, frequent, costly to process losses or to provide the policyholder with a direct incentive to practice effective loss control. Occasionally, risk retention occurs because excess insurers are unwilling to write coverage below a specified threshold. For example, if a primary insurer is willing to write coverage up to \$250,000 per occurrence and excess insurers require underlying limits of at least \$500,000, the "insured" will be forced to retain an excess layer of \$250,000 to fill the gap.

Businessmen react in a variety of ways to the need to develop a risk retention program. Some simply make no special provision for the potential losses involved and take a financial gamble that their earnings and, if needed, assets will be sufficient to cover any losses that may arise. Others set aside "book reserves" (accounting codes assigned for loss costs) or actual "funded reserves" to prepare for anticipated losses. Some, usually

larger international companies, charter insurance companies (referred to as "captives") to handle their risk retention needs. A special incentive to establish captive companies was that, until recently, they appeared to offer a clear tax advantage as a means of funding a risk retention program. However, the Internal Revenue Service in recent years has sought to eliminate the tax deductibility of premiums paid to captive insurance companies, and its position has been supported by the Financial Accounting Standards Board.

These captive insurance companies sometimes expand their operations to the point where they become profit centers for their owners by engaging in a normal insurance business - i. e., by issuing policies to organizations other than their owners. Often, these companies operate as nonadmitted companies - i. e., surplus lines insurers and reinsurers. The success of these companies is dependent upon the availability of reasonably priced reinsurance. If they were denied the opportunity to spread the risks they assume, they could easily be bankrupt.

The "cost" of risk retention is difficult to measure. The rise of the corporate "risk manager" is rather recent, and the management processes for weighing the relative costs of insurance versus retention have not achieved a stage of development sufficient to begin to assess the real costs involved.

The financial capacity to retain risk has not been determined with scientific rigor. However, three rules of thumb are used to estimate the capacity of a commercial enterprise to retain risks of loss on an annual aggregate basis. Per occurrence retention limits are estimated to be 10 percent of this amount. These rules of thumb are as follows:

- § Net working capital method: 1 percent of net working capital
- § Earnings/surplus method: 1 percent of current surplus, plus
1 percent of the average earnings over the past 5 years
- § Sales method: 0.1 percent of net sales.

In practice, these guidelines are not universally applied, although many risk and insurance management consultants do use them.

No real measure of the extent to which planned risk retention is practiced exists. Unplanned retention exists whenever insurance is not purchased and the loss potential is ignored. Several recent surveys indicate

that voluntary risk retention, particularly among larger organizations (Fortune 1000), is increasing. A 1973 Fortune survey* reported that 14 percent of the top 500 companies retain 25 percent or more of their total risk. Of those retaining some portion of their exposures, 66 percent said they planned to increase their retentions. Nearly 40 percent of the second Fortune 500 had similar plans. The RETORT, Inc., survey indicated that 19 of the 85 respondents (22.4 percent) are engaged in some form of risk retention ranging from "no coverage" to \$200 per occurrence deductibles. Six of the 188 respondents in the MAPI survey indicated that they retained some portion of their products exposure.

* * *

Of the three mechanisms that have been used traditionally to cope with coverage availability problems in the commercial insurance market - reinsurance, surplus lines insurance, and risk retention programs - all have been activated to some degree to meet the product liability availability problem. Unfortunately, no definitive information can be obtained on the extent to which any of these three mechanisms is being employed. However, both our interviews and the fragmentary data that are available suggest that the use of surplus lines carriers has been the most frequent response to problems of obtaining needed coverage in the regular market. This is because it is frequently the small firm with less than \$2.5 million sales that has the most difficulty obtaining coverage, and these firms lack the financial capacity to absorb any significant amount of risk through a risk retention program. An increase in the use of surplus lines carriers leads, in turn, to an increase in the use of reinsurance since surplus lines carriers typically reinsure a very high proportion of the risks they write.

* - "How Major Industrial Corporations View Property-Liability Insurance," a survey by Fortune Market Research, October 1973, page 21.

C - PATTERNS OF RESPONSE
FOR SELECTED PRODUCT CATEGORIES

In this section, we review the patterns of response to the product liability problem by insurance mechanisms for each of the product categories selected for special attention in this study. These are:

1. Industrial machinery
2. Industrial grinding wheels
3. Ferrous and nonferrous metal castings
4. Industrial chemicals
5. Aircraft components
6. Automobile components
7. Medical devices
8. Pharmaceuticals.

In each product category, we examine: (1) the extent of the product liability problem and its causes; (2) the way the insurance mechanism has responded to the problem; and (3) the outlook for the future. From this review of the situation in eight product categories, we draw some general conclusions regarding common problems faced by these product categories.

It is important to realize that, for each product category, the responsiveness of the insurance mechanism can be significantly different for large firms (over \$100 million in annual sales) and the small (under \$2.5 million in sales). The problem of coverage availability is almost always less severe

for the larger organization. This is due to three reasons: (1) they pay more premium to insurers and more commissions to agents and brokers; thus, they have more leverage over insurers and can seek out the largest, most expert brokers and agents; (2) they have considerable financial and administrative capability to bring to bear on their insurance problems through risk retention programs and retrospective rating plans; and (3) they are less likely to be vulnerable to severe product liability problems if they have a diversified product line that enables them to spread the effect of rate increases that apply to only part of the line and to offer the insurer a balanced mix of product risks.

INDUSTRIAL MACHINERY

Although insurance companies have offered industrial machinery product liability coverage for many years, until recently they have not considered this category a problem. According to industry representatives, their change in attitude has been triggered by: (1) the uncertainty arising from the loss potential on old, often modified machinery; and (2) the difficulty of determining how many of these machines may still be in use.

Industrial machinery risks vary widely in size. According to our review of underwriting files, large accounts in this industry have many policies written at high limits of liability - 21 percent of those identified had aggregate limits of \$1 million or more. Also, loss control surveys focusing specifically on products were identified in over 70 percent of the accounts covered in our underwriting file review, compared to the all-industry average of 54 percent.

For companies with poor loss experience, agents and brokers cite examples of sharp increases in general liability premiums - up from less than 1 percent of sales 3 years ago to as much as 3 to 5 percent this year. Trade association surveys also indicate substantial increases in the cost of product liability insurance.*

¶ An American Textile Machinery Association survey of its membership (49 responding) shows that the average annual cost of product liability coverage in 1976 ranged from a high of 1.1 percent of sales for companies with under \$2 million sales to 0.1 percent for companies over \$50 million sales. Claims rose sharply between 1974 and 1975 and were reflected in a tripling of premiums in many cases.

* - Please refer to footnote on page 3-8.

- ¶ A similar pattern is evident in the survey conducted by the National Machine Tool Builders Association (60 responses). Despite rising premiums and claims, the average premium is 0.8 percent for companies with under \$2.5 million sales, 1.9 percent for those with \$2.5 million to \$7.5 million, and 0.3 percent for those with sales over \$50 million. These averages reflect various limits of liability and coverage plans.
- ¶ The RETORT, Inc., survey conducted in May and June indicated that a number of industrial machinery companies have begun to experience placement problems in the past 2 years. Of 16 companies identified by RETORT as being without coverage, 5 are in the industrial machinery field - 4 manufacturers and 1 dealer.
- ¶ A survey by the Machinery and Allied Products Institute showed that 8 manufacturers of 188 responding were without coverage.
- ¶ A survey by the Machinery Dealers National Association showed that 67 dealers of 247 responding were without coverage.
- ¶ A survey by the Woodworking Machinery Manufacturers Association showed that 5 were without coverage.

Response to Problem

Underwriters we interviewed characterized industrial machinery as a class of products that they are underwriting more selectively than before, and none view it as a class they are trying to expand. Some underwriters no longer write certain industrial machinery products - including presses and stamping machines; others are using a more restrictive/selective approach across the board.

Outlook for the Future

There appears to be no immediate relief in sight that would dampen the impact of increased costs. We found that several association-sponsored "tiered" plans designed to meet the problem are in various stages of development but could find none in operation.

Generally, these plans involve sharing more of the risk with the insureds. One plan, for example, employs three tiers: (1) a deductible; (2) a "banking excess" arrangement, the practical effect of which is to increase retention limits; and (3) "pure" insurance coverage.

The deductible tier functions as a normal deductible - i.e., the insured directly assumes the cost of losses up to a limit on a per occurrence basis.

The second tier - the banking excess tier - involves an agreement with an insurance company to service the claims in this layer, including payment of the claims. The company entering into this agreement with the insurance company repays as "premium" all claim costs, including servicing costs and interest, to the insurance company over a fixed time period - e.g., 6 years. The term "banking" is used because the insurance company's role in this tier is analogous to a bank's - it lends money (claim costs) which the insured repays with interest over time.

Above the deductible and banking tiers there is a pure insurance tier that consists of an excess or umbrella policy. Losses in this tier are paid entirely by the insurance company in return for the premium paid by the insured.

The plan provides a manufacturer three things: insurance against catastrophic loss, ability to finance losses above the deductible level on a tax-deductible basis, and claim servicing for losses in all three layers. The last is a key point because excess insurers are reluctant to insure companies that do not have insurance companies servicing claims in the underlying limits of liability.

This kind of arrangement could be worked out with three separate groups - a bank, a surplus carrier, and a claim servicing bureau. Premiums and claim-related expenses are tax deductible as are borrowed funds used to pay such incurred expenses. Conversely, loans used to fund a contingent claim reserve by a manufacturer would probably not be tax deductible.

In summary, there appear to be a growing number of small industrial machinery companies going without product liability coverage. The cost of coverage has increased sharply in recent years, and insurance companies are writing this business more selectively. Since manufacturers are still evaluating the tiered approach to coverage, it is too early to say whether this approach will provide an effective answer to the availability problem.

INDUSTRIAL GRINDING WHEELS

Among the eight product classifications studied, industrial grinding wheels are unique in that more than two-thirds of this market (in terms of sales volume) purchase coverage from a single insurer. This insurer has been active in providing legal defense and developing safety and loss control standards used to solve some of the historical product liability problems associated with grinding wheels. Data from the underwriting file analysis indicate that these risks are almost exclusively (a) rated or composite rated, and almost one-half of them are written on a retrospective basis. Further, the files indicated that, in over 85 percent of the cases, the insurer had conducted loss control surveys of these risks.

After World War II, the Grinding Wheel Institute became concerned about the increasing frequency of costly product liability losses. This concern was accentuated by the rapid rise in premiums for product liability insurance. Led by several major manufacturers that dominate the industry and joined by one insurance carrier and a research organization - Cornell Aeronautical - the group developed a two-phase program to hold down insurance costs. The initial phase was aimed at reducing the number of grinding wheel accidents through strict loss control standards. The second focused on the development of an aggressive legal defense.

Before offering insurance to a grinding wheel manufacturer, the insurer handling most of the grinding wheel business surveys the design, testing, fabrication, and labeling procedures followed (e.g., are there clear instructions indicating the maximum speed and longevity for the wheel?). If the procedures conform with industry standards, the surveyor sends a positive report to the underwriter.

In conjunction with the development of definitive loss control standards, the Institute identified a number of attorneys capable of representing it and its members in the defense of bodily injury suits. These attorneys spent 2 to 3 days on the shop floor to gain a firsthand understanding of the grinding wheel manufacturing process. The insurer cooperated with this effort and agreed to use the attorneys identified by the Institute. Further, it appointed a senior claims adjuster to supervise the handling of all grinding wheel claims.

Despite the long-standing effectiveness of this loss control and defense program, recent loss experience has been disturbing:

- ¶ A Grinding Wheel Institute survey conducted in the first quarter of 1976 indicates that there is an upward trend in the number of claims filed, the number of claims resulting in suits, and the cost of product liability coverage. The Institute represents at least 90 percent of domestic sales of all abrasives, and two-thirds of the 34 members responded.
- ¶ After decreasing 12 percent from 1970 to 1975, basic limits rates computed by the major insurer rose 55 percent from 1975 to 1976.

The Institute plans to continue the two-part program it developed in the 1950s to reduce the number of grinding wheel accidents and provide for an aggressive legal defense. However, an Institute representative indicated that manufacturers plan no new additional major investment in these areas because they feel their programs go as far as possible in controlling potential risk.

In spite of manufacturers' continuing concern with loss prevention and a long-standing relationship with an insurance carrier with specialized loss prevention and claims handling expertise, it would appear that there are limitations on the degree to which an effective loss prevention and defense program can contain product liability claim costs. This appears to be due to: (1) the lack of advancements in loss control technology; (2) the fact that compliance with existing standards is voluntary; and (3) changes in the legal interpretation of what constitutes a defect.

FERROUS AND NONFERROUS METAL CASTINGS

Although we found no specific evidence that foundries are going without product liability coverage, they are finding it increasingly difficult to obtain. In this case, however, the difficulty is due to both product- and non-product-related hazards.

- ¶ Among the products singled out are castings, which require severe temperature conditions or high pressure - e.g., steam turbines.
- ¶ The two non-product-related hazards are fire and occupational disease.

Foundry risks are underwritten by many insurance companies, and each typically carries a mix of foundry types in its book of business - e.g., steel, aluminum, gray iron. In general, insurers are applying greater scrutiny in writing foundry risks. Like industrial machinery, castings are "long-life" products and, therefore, are difficult to price. During our underwriting file review in the field office of one insurance company, we observed how these risks are handled. Because this office underwrites a number of foundry risks:

- ¶ It feels that product (a) rates for gray iron and steel foundries in that region should be as much as 200 to 300 percent higher than ISO guideline (a) rates.
- ¶ It has significantly upgraded its product-related expertise. Underwriters who specialize in evaluating foundry risks work with loss control engineers in carrying out a program that reviews product test results for compliance with industry standards.

The outlook for foundry risks is generally the same as industrial machinery - increasing costs. The one difference is the added negative impact of non-product-related hazards for foundry owners. These hazards make the workers' compensation exposure far less attractive than it would be otherwise. Consequently, this coverage cannot be used to offset adverse product liability experience. This could increase the difficulty faced by these companies since their workers' compensation exposures offer little profit potential that could balance or offset their product liability risk in the eye of the underwriter.

INDUSTRIAL CHEMICALS

The advantage of size show up clearly in the industrial chemical industry. Brokers and agents have said that large chemical companies have little trouble obtaining product liability coverage; small and medium-sized companies face greater difficulty, although we found evidence of only three industrial chemical companies going without coverage.

Underwriters cited three considerations that make industrial chemical manufacturers undesirable. They are: (1) the uncertainty involved in evaluating the complexities of a chemical risk; (2) the potential for catastrophic loss; and (3) the relatively limited impact of loss control on the potential for catastrophic losses.

One indication of underwriting concern discovered during our underwriting file analysis was that this category of products was the most frequently covered by specific loss control survey evaluations - 93 percent

of all risks compared to the all-industry average of 54 percent. Despite the advantage that large companies have in obtaining coverage for certain products, the sheer size of the company and the risk sharing this permits is not always sufficient to make the risk insurable. Widely applied product exclusions include chemicals that are known or suspected to produce large losses - e.g., pesticides and herbicides. In contrast to industrial machinery, these losses are often not immediately recognized. Rather, the problem may come to light only after the product has been in use for a number of years and then only when a number of related incidents point to the chemical as the cause of loss.

For the large chemical companies, the insurance company, the broker, and the insured work together to design a mutually satisfactory program. To the carrier, these large accounts are "self-rating" and, in developing the account premium, product coverage is often (a) rated and modified by experience rating before being combined with other property and liability coverages. Where the manufacturer retains a portion of his risk - for example, the first \$2 million to \$3 million - it sometimes uses a captive insurance company to fund the retained limit. Above retained limits, the manufacturer can then often buy reinsurance for the captive.

For the smaller companies with less available resources, the problem of both cost and availability is likely to become increasingly severe.

AIRCRAFT COMPONENTS

The aircraft industry has a tradition of rigid government-sponsored quality control and a long-standing working relationship with aviation pools. This tradition has made it possible for the industry to anticipate - and adapt to - the insurance implications of technological improvements in this mode of transportation.

In the 1920s, insurance carriers formed aviation pools to spread the large risk inherent in this business. The approach used was called "layering" - i.e., each insurance company assumed the risk for a limited amount of loss within a prescribed range (e.g., for losses from \$5 million to \$10 million). With the advent of the jumbo jets in 1969, the magnitude of exposures made the layering approach obsolete.

Beginning in 1969, members of the pools began to assume a percentage of the total limits purchased by an insured through the pool - for example, 5 percent of all losses up to \$200 million. This shift attracted more

property/liability companies and some large life insurers to the aircraft insurance market. As a result, available limits of liability for products in this market grew from the \$100 million range in 1969 to over \$300 million today.

We learned that the transition from a layering to a "vertical" approach to coverage was smooth and successful for this reason: Manufacturers and insurance carriers alike understood the insurance cost implications of introducing a new product containing a significantly higher level of exposure to catastrophic loss. Their attitude is apparent in the results - i.e., according to brokers and insurance executives, rates have remained the same or declined slightly for General Aviation manufacturers and declined dramatically for Air Transport manufacturers, but companies are buying three and four times more insurance than they were in 1969. The decline in rates cited could not be verified through data from underwriting files as the majority of these risks are written in underwriting pools and these pools were not included in our file review.

Insurers have also responded in other ways. Working through the pools, they have developed highly specialized underwriting and accident investigation capabilities. In the U.S. Aircraft Insurance Group, one of two major U.S. pools, a team of six underwriters has the authority to bind risks for members of the pool. The group also employs a talented team of 12 accident investigation experts and a comparable number of claim specialists who thoroughly investigate accidents, manage the policyholder's legal defense, and supervise the insureds' loss control programs.

Standards for obtaining insurance from the pool are strict. Insureds must demonstrate compliance with Civil Aeronautics Board standards and develop and maintain wide-ranging testing facilities to ensure quality production and maintenance.

The aircraft industry and its insurers have adapted to changing insurance needs with new approaches that have maintained availability in the face of rising exposures to loss. This sound relationship is expected to continue in the future and offers a successful model to other product manufacturers.

AUTOMOBILE COMPONENTS

This product category includes a variety of manufacturers: (1) large automobile manufacturers that make their own components; (2) independent suppliers of component parts; (3) suppliers to the aftermarket (replacement parts); and (4) manufacturers of safety devices.

In a March 1976 survey of its general membership, which comprises about 600 manufacturers and 500 retailers, the Automotive Parts and Accessories Association learned that 3 of 119 respondents were "going bare" - i.e., had no product liability insurance although they felt they needed it.

During the summer of 1976, this industry became increasingly concerned about the rising cost of coverage. Therefore, the Association conducted a second survey in August - targeted this time at the 600 manufacturers. Of the 63 members responding, 7 reported no coverage. Two said that it was too expensive; the other five gave various reasons such as "not necessary" or "self-insured."

In our own review of coverage problems with agents and brokers, we learned of no other manufacturers going without insurance.

- ¶ Interviews with insurance companies and the underwriting file review indicate that large automobile manufacturers obtain product liability coverage from a variety of insurance carriers.
- ¶ Independent suppliers of component parts are either included on the manufacturer's policy in vendor endorsements or they obtain product liability coverage on their own. Where suppliers of components are not included on the manufacturer's policy, or have not entered contractual indemnity agreements (referred to as hold-harmless agreements, which shift the component manufacturer's liability to the automobile manufacturers), they countersue their suppliers where components are not made according to contract standards. Underwriters indicated that this practice is not widespread because it is recognized that established suppliers would simply pass back the cost of any awards and related expenses to the automobile makers in the form of increased prices.

One group of automotive components that once caused considerable underwriting concern is automobile safety devices. Without a history of loss experience as a guide, underwriters had difficulty pricing this business in the late 1960s and early 1970s when sales were growing fast. One fear was that safety devices would attract lawsuits when the real fault lay with the construction of the automobile and not the functioning of the safety device. As a result, the underwriters' unavoidably subjective evaluation of their loss potential fluctuated widely - a condition that was reflected in

abrupt and significant annual premium increases. Now, with better data on loss experience and improvements in automobile safety design, underwriters' fears have diminished and indications are that recent premium increases have been less dramatic.

Manufacturers have tried to meet rising coverage costs by obtaining product liability insurance on a group basis through the Automotive Parts and Accessories Association. According to an Association staff member, of the six insurance companies approached by the Association, all refused to write such coverage for the manufacturers. If only retailers in the Association applied for coverage, the response would be different, they said, due to the tendency of retailers to be bypassed by claimants in favor of the manufacturer. So industry members continue to buy coverage on an individual basis.

Insurers and manufacturers alike see no technical innovations on the horizon that could dramatically cut product coverage costs by eliminating certain types of claims. Although the cost of coverage will probably continue to rise, underwriters point to growing safety consciousness as a partial brake to increases in claim costs.

MEDICAL DEVICES

Historically, medical device manufacturers have obtained product liability coverage from a variety of insurers. Regardless of the size of the insured and type of rating plan used, however, these insurers tend to exclude certain products from coverage, including those with known potential for catastrophic loss. However, within this industry, there is no evidence to date of manufacturers going without coverage.

According to the Health Industry Manufacturers Association, none of its 160 members is totally without product liability insurance.

For underwriters, the major problem with this product category is the difficulty of obtaining predictable loss experience.

- ¶ First, new products are continually being developed for which there is no relevant loss experience.
- ¶ Second, since some products have a known capacity for producing catastrophic losses, there is fear that other newly introduced devices will offer a similar loss potential.

As in other product classes, there appears to be no short-term relief from cost increases in sight. The action taken by one small group of medical device manufacturers may suggest a possible course of action that would be feasible for some firms. According to one of the brokers interviewed, this group has established an association captive insurance company for sharing small losses among themselves and for buying reinsurance on a group basis.

PHARMACEUTICALS

The pharmaceuticals product class is dominated by several large manufacturers, but the industry in the aggregate includes many small and medium-sized companies. For many of the largest manufacturers, product liability insurance is provided by a major carrier that has developed specialized underwriting, loss prevention, and claim handling services for large accounts. The large manufacturers have worked in concert with the government in setting product and loss control standards for the industry.

Like the medical device category, this group includes products with a known potential for catastrophic loss. Product liability coverage for pharmaceutical manufacturers normally excludes these products but, according to our file analysis, manufacturers generally obtain "products only" policies written with large deductibles for these high-hazard products.

Pharmaceutical manufacturers, however, are finding it more difficult to obtain the limits of liability they feel they need at a price they feel they can afford because individual insurance companies are increasingly less willing to write large primary or excess limits.

Insurers are structuring pharmaceutical insurance packages around higher retention limits. For example, one insurance plan we reviewed had, in 1975, a retention limit of \$1 million and \$99 million of coverage in excess of \$1 million. Insurance for the excess was provided in 10 layers, each consisting of four to five insurers. By 1976, the retention limit in this plan had climbed to \$2 million, and the number of insurers involved had tripled.

As a funding device for the retained limits, at least three pharmaceutical companies have established captive insurance companies in which they deposit funds for claims payments. This device has favorable cash flow

implications, for the dollars deposited are tax deductible* and can generate interest income for the parent until the funds are needed. Purchase of reinsurance and claim servicing arrangements are also done through the captive.

The outlook for pharmaceutical manufacturers follows the familiar pattern. Large companies are generally "self-rating" and will probably always be able to purchase coverage above some retention level; small and medium-sized companies are less fortunate, since they do not have the means to absorb a very high proportion of the risk.

Swine Flu Arrangement

During the summer of 1976, an interesting phenomenon occurred involving pharmaceutical manufacturers, the Federal Government (Department of Health, Education, and Welfare; the Congress, and the Executive Branch), and both insurers and reinsurers. Earlier in the year, a potential "swine flu" epidemic was predicted. Four large drug manufacturers were asked to develop large batches of vaccine to immunize millions of Americans before the flu season in the fall. Insurers of these manufacturers reacted swiftly to the threat of many "nuisance claims" that such a massive short-term program could produce. Insurers also feared that these inevitable claims would be costly to defend, particularly with the trend toward strict or even "absolute" liability. Thus, insurers refused to continue the coverage of the four firms involved.

Following the cooperative efforts of all concerned parties, a bill was passed by both Houses of Congress on August 10 and was signed by President Ford 2 days later. Vaccinations began on October 1. This law made the Federal Government the initial target of all damage suits arising out of the voluntary participation in the program. The government could later sue the manufacturer if negligence was the cause of injury.

Insurers, in return, offered \$220 million in coverage to protect the four drug firms against this contingent liability. This offering was supported by more than 40 insurance companies and their reinsurers. Under the plan, vaccine manufacturers would retain \$2.5 million. Each manufacturer can then purchase up to \$55 million.

* - This practice is currently being challenged by the Internal Revenue Service and the Financial Accounting Standards Board, Ruling Number 5.

This arrangement offers an interesting model for future evaluation as it relieves insurers of their obligation of responding to worthless claims (they will be screened out by the government) and restores the theory of negligence (in lieu of the strict liability doctrine). This approach was successful as it converted a "no coverage" response to a willing offer of \$220 million in coverage by insurers by dramatically reducing the uncertainties regarding potential claim costs.

Special Arrangement In West Germany

An interesting example of government and industry cooperation has taken place in Germany following the "Thalidomide" case in 1960-1961. The German Government has passed a law for medical products, regulating prescriptions, product testing and, among other things, a compulsory insurance law for all pharmaceutical products. German insurers have formed a pool to underwrite this liability, based on a law passed in August 1976. The pool has been organized under the leadership of the Munich Re and was activated on October 8, 1976. The pool provides excess insurance after the primary insurance is exceeded or exhausted. Participation in this "excess insurance" pool is open to all insurance and reinsurance companies operating in Germany.

SUMMARY

While product liability insurance costs are rising, traditional insurance mechanisms are responding to provide product liability coverage in most of the eight product classes we reviewed. Although insurers have responded to the need for greater product-related expertise in loss prevention and claims handling in some industries, there is evidence that significant improvements can be made in others.

One aspect that clouds the future in all industries is changing judicial interpretations of product liability.

- ¶ These interpretations have broadened exposure to loss and, as a result, product liability losses have increased. The eight classes we reviewed are feeling the impact of rising claim costs in the form of higher premiums and through coverage limitations that transfer part of the insurance risk back to the insured - for example, through larger deductibles.

¶ Changing legal interpretations also make it difficult for the underwriter to evaluate product exposure. The key to evaluating an exposure is predictable loss experience. As new legal decisions invalidate previous experience, underwriters become less willing to write the business and tend to charge higher premiums to absorb any unanticipated losses.

For some product classes, such as industrial grinding wheels and aircraft components, manufacturers and their insurers have been able to overcome this uncertainty by setting and adhering to high loss prevention standards and aggressive legal defenses. But this is not the case in all product classes. And even with strong industry leadership, the cost of product liability coverage for grinding wheels has gone up.

Until greater predictability can become a characteristic of the product liability insurance market, access to coverage at stable rates will continue to be a problem.



TO THE PRODUCT LIABILITY PROBLEM

CHAPTER SUMMARY

This chapter describes and evaluates the range of potential remedies which have been proposed for the product liability problem.* In considering these remedies, it is important to keep in mind the following key conclusions about the nature and causes of the problem discussed in previous chapters:

1. While the cost of product liability insurance has increased substantially in most industries, the problem of increasing costs is severe in only a few industries, notably industrial machinery, industrial chemicals, automotive parts, and pharmaceuticals.
2. The problem of availability and affordability of product liability insurance is concentrated in the smaller firms in those industries.
3. The availability problem could be temporary since one of its causes - the thin surplus position of insurance companies - could change quickly with a sharp improvement of overall underwriting profits.
4. The problem of increasing product liability insurance costs is less likely to be temporary (even though the recent sharp rate of increase is unlikely to continue) since it is caused primarily by the increasing frequency and severity of product liability claims, which arise mainly from the erosion of defenses in the tort liability system and the increasing tendency toward very large awards to plaintiffs.
5. Some of the factors that have given rise to increasing claim costs apply to all forms of liability; others, such as a manufacturer's perpetual liability for products made many years ago and the tendency for courts to hold manufacturers liable even when products are altered or misused, are factors that relate specifically to the product liability problem, especially for certain types of products.

* - Policy viewpoints expressed in this chapter are not necessarily those of the Interagency Task Force on Product Liability. See note on page i.

6. Since most products are sold and used in many states, tort law modifications would have to be made in the most populous states before they would have any impact on insurance costs.

Thus, the problem has a number of dimensions and can be attacked from several angles. Broadly, the potential remedies identified are of two types if they are classified in terms of their primary purposes.

- A. Remedies aimed at expanding insurance availability and assuring compensation for victims
- B. Remedies aimed at containing product liability insurance costs.

Remedies in these two categories are interrelated to a degree since remedies that would have a favorable impact on the cost of product liability insurance would also have some positive effect on the availability of affordable coverage. However, the primary thrust of potential remedies in each of these two categories differs significantly.

EXPANDING AVAILABILITY AND ASSURING VICTIM COMPENSATION

Although our assessment of the product liability insurance availability problem is that it is not critical at this point, the situation could worsen quickly. For this reason we believe it would be prudent to establish governmental standby authority to relieve the problem. After reviewing the various alternative types of mechanisms that might be used at either the Federal or state level, we have concluded that a Federal facility to provide product liability excess insurance and reinsurance would be the most appropriate approach to meeting this need if it should develop.

We believe Federal action is more appropriate than a state-by-state approach because most manufacturers' products are sold and used in a large number of states. Thus, claims against a manufacturer in Illinois could originate in Florida or Oregon. The provision of excess coverage and reinsurance rather than primary coverage seems most appropriate in order to avoid disrupting existing primary insurance relationships that are especially significant in this line of business and thereby permitting easier withdrawal if the availability problem does indeed prove to be temporary.

We suggest that legislation creating such a mechanism should limit its lifetime to no more than 3 years; it might also stipulate that under no

circumstances would availability of the mechanism be extended beyond 3 years in any state that failed to enact certain tort reforms. The law should also spell out a clear-cut procedure for determining whether the mechanism should be activated so that it will be used only if there is convincing evidence that a severe availability problem exists.

A similar kind of mechanism could also be created on a strictly voluntary basis by private insurers, and we believe they should be encouraged to move in this direction unless evidence develops that the availability problem is resolving itself.

Other actions that could help ease the availability problem are:

1. Changes in the laws and regulations affecting the formation and tax treatment of captive insurance companies and funded risk-retention programs
2. Implementing the planned expansion of ISO's program for collecting and analyzing data on product liability premiums and losses.

While we believe actions in both these areas will have somewhat limited impact, they could be helpful and should be pursued. On the other hand, after reviewing the various coverage modifications being considered, we conclude that they would have only marginal impact on the availability problem.

CONTAINING PRODUCT LIABILITY COSTS

There are two kinds of approaches to controlling or reducing product liability costs. One is to attack the problem by taking steps to reduce product hazards. The other is to modify or replace the tort liability system in order to restore eroded defenses or to cut down on litigation costs and overly generous awards.

1. Loss prevention. Although reducing product hazards through improved design, quality control, and instructions and labeling for users is clearly the most desirable way to reduce product liability insurance costs, we can see no quick or easy route to accomplishing this objective. Considerable legislative authority to establish and enforce product safety standards already exists, and a great deal could be done to implement the Consumer Product Safety Act and Occupational Health and Safety Act more effectively.

Similarly, insurers have a long way to go to capitalize fully on the opportunities they have to use the information they collect on the causes of losses and to equip more fully their loss prevention specialists to help their clients do a better job of loss prevention. However, the incentives to give greater emphasis to loss prevention already exist. Time is needed to develop a larger number of skilled personnel capable of dealing more fully and effectively with some of the complex loss control problems involved in this line of business.

2. Changes in the tort liability system. Since the sudden surge in product liability claims seems to have been stimulated more by the extension of the doctrine of strict liability in the courts than by any other single factor, changes in the tort liability system would appear to offer great promise for containing the increase in product liability costs over the long term.

Of the various proposals that have been advanced to replace all or part of the tort liability system with a "no-fault" system, the one that seems to us the most practical and desirable is to make workers' compensation the sole source of recovery for workplace injuries, with a provision that would make suppliers liable for part of the payments if defective products are at fault. While this remedy would not be easy to implement and probably would need to be coupled with revisions in workers' compensation benefit structures, we believe its potential for relieving some of the most severe product liability cost problems is sufficiently great that it should be the subject of further, more concentrated, evaluation as part of a broader evaluation of the workers' compensation system.

In addition, a review of various modifications to the tort system that are being considered, with particular emphasis on the impact they might have on product liability costs and availability, convinces us that the following should be pursued further for potential incorporation in a model state law:

- a. Modifications that apply specifically to product liability
 - Modifying the statute of limitations to begin when the product enters the stream of commerce
 - Establishing a misuse defense

- Clarifying the basic standard of responsibility for product liability with regard to
 - . "Unavoidably unsafe" products
 - . "Useful life" of a product.

In addition, assuming that workers' compensation is not made the sole source of recovery in the near term further consideration should be given to limiting subrogation of workers' compensation claims or to the application of contribution concepts in workplace injury cases.

b. Modifications that apply to tort liability generally:

- Establishing a declining scale for attorneys' contingent fees
- Regulation of awards for pain and suffering and other general damages
- Limitation of punitive damages and direction of such payments to state funds
- Modification of the collateral source rule
- Establishment of the comparative fault principle
- Mandatory arbitration
- Regulation of expert testimony
- Use of periodic payments for awards.

While our interviews with insurers suggest that only one of these remedies - modifying the statute of limitations - would have a direct and immediate impact on product liability insurance costs (for those products affected), the adoption of a significant number of these modifications in key states would signal a change in the tort liability climate that could produce a dramatic impact on both the cost and availability of product liability insurance over a period of several years.

Of course, since most products are distributed in many states, it would be essential that the changes be adopted in most of the populous states in order to enable insurers to take them into account in pricing and risk selection. Therefore, we believe there is a need for model state legislation coupled with some incentive for state adoption.

We recommend that the following actions be taken:

1. Develop appropriate legislation creating, on a standby basis: (a) a Federal facility to provide excess insurance and reinsurance for product liability risks, and (b) a system for monitoring the availability of product liability insurance so that the government can determine whether this mechanism should be activated.
2. Identify and evaluate actions the Federal and state governments can take to remove impediments to: (a) the formation of captive insurance companies and well-managed risk retention programs by individual firms, and (b) coordinated insurance programs by groups of firms in the same industry.
3. Develop proposed model tort legislation based on further evaluation of the specific possibilities for change included in this study. (Data from ISO's closed claim study, which will be available in detail in 1977, will provide a good basis for evaluating the economic impact of some of these changes.)

In addition, we recommend that the possibility of establishing workers' compensation as the sole remedy for workplace injuries should be evaluated in greater depth.

Our detailed discussion of the potential remedies we have considered is organized as follows:

- A. Remedies Aimed at Expanding Insurance Availability and Assuring Compensation for Victims:
 - A.1 Governmentally Initiated Insurance Mechanisms
 - A.2 Voluntarily Initiated Insurance Mechanisms
 - A.3 Modified Product Liability Coverage
 - A.4 Expanded Product Liability Data Gathering
 - A.5 Mechanisms Designed to Eliminate Unsatisfied Judgments.

B. Remedies Aimed at Containing Product Liability Insurance Cost:

- B.1 Expanded Loss Control Efforts by Insurers
- B.2 Changes in the Workers' Compensation System
- B.3 No-Fault Compensation Systems
- B.4 Mandatory Arbitration
- B.5 Tort Law Modifications.

Note: McKinsey & Company took lead responsibility among the contractors for remedies discussed in section A as well as for "Changes in the Workers' Compensation System," discussed in section B. For the other remedies in section B, McKinsey's responsibility was to provide comments, rather than full evaluations.

A. REMEDIES AIMED AT EXPANDING INSURANCE

AVAILABILITY AND ASSURING COMPENSATION FOR VICTIMS

In the material that follows, we describe and evaluate a range of remedies aimed at expanding insurance availability and assuring compensation for victims. The first two sections are devoted to alternative insurance mechanisms which might be used to ameliorate the problem of availability of product liability coverage if this problem should become more severe, treating separately mechanisms that might be implemented by government initiative - whether at the Federal or state level or both - and those that might be implemented by purely voluntary action by insurance companies, agents and brokers, or insureds. The third and fourth sections deal with proposed changes in product liability coverage and data gathering procedures that could have an impact on the availability of product liability coverage. The final section discusses special mechanisms designed specifically to assure compensation for victims of products-related injuries.

The material covers:

A.1 Governmentally Initiated Mechanisms:

- ¶ General Considerations
- ¶ Assigned Risk Plans
- ¶ Governmentally Operated Funds
- ¶ Pooling Mechanisms, including joint underwriting associations and reinsurance arrangements
- ¶ Evaluation and Conclusion.

A.2 Voluntarily Initiated Insurance Mechanisms:

- ¶ Pooling by Insurers
- ¶ Joint Action by Insureds.

A.3 Modified Product Liability Coverage

A.4 Expanded Product Liability Data Gathering

A.5 Mechanisms Designed to Eliminate Unsatisfied Judgments.

We are indebted to Professor Douglas G. Olson of the Wharton School for some of the information and insights contained in this material, particularly on the subject of joint underwriting associations.

A.1 - GOVERNMENTALLY INITIATED MECHANISMS

GENERAL CONSIDERATIONS

The product liability "problem" has a number of dimensions, but one of the most critical and difficult questions to be addressed is whether the problem of availability and "affordability" of product liability insurance has reached the point in some product categories and industries where special governmental action is required either to supplant the traditional insurance mechanism or to exert unusual influence or control over its performance in this area.

Our review of the history of special "residual" market mechanisms that have been instituted in the past suggests that such mechanisms are rarely easy to implement and that they frequently give rise to a host of unanticipated problems. Therefore, in our view, in order to justify establishing a governmentally mandated mechanism of any kind, it would be important to have convincing evidence that:

1. A substantial number of businesses are threatened with extinction because of high cost or unavailability of product liability coverage
2. These businesses manufacture products that are needed in the economy
3. These businesses follow safe practices in the manufacture of these products
4. The consequences of no government action in this area would be substantial unemployment, curtailment of new product development, transfer of these industries to foreign manufacturers, the absorption of these businesses by very large manufacturing enterprises, or significant inflationary pressure.

The evidence that we have been able to gather to date to help answer these crucial questions is by no means convincing. Up to this point we have

been able to identify by name 74 firms that have "gone bare" because of their inability to obtain coverage at a price they consider affordable, and we have no information on whether these firms are following acceptable loss prevention practices. Insurers tell us that associations that have contacted them concerning group plans seem to have difficulty getting enough interested participants to go beyond the initial discussion stage. Six state insurance departments have reported that they do not have what they regard as a serious product liability availability problem at this time, though they believe one could develop fairly quickly.

On the other hand, we are told by some trade associations that their survey information is already out of date and that the next round of surveys will show a substantially worsening availability/affordability problem. Obviously, this is a situation that should be monitored closely.

Unfortunately there are no hard and fast criteria that can be applied to determine when the availability/affordability problem has reached a point where special action is needed and appropriate. Many states provide that special mechanisms for medical malpractice insurance shall be activated when the insurance commissioner finds that there is "substantial unavailability." However, we have found no state that has established clear guidelines to determine when substantial unavailability exists.

There are a number of types of special mechanisms that have been used in the past at both the Federal and state levels that can provide insights that can be applied in designing a program to meet the particular requirements of product liability coverage. These are:

At the state level:

1. Assigned risk plans for automobile insurance
2. Joint underwriting associations for medical malpractice and automobile insurance
3. Reinsurance facilities for automobile insurance
4. State insurance funds for medical malpractice and automobile insurance.

At the Federal level:

1. Federal crime insurance
2. Federal flood insurance.

At the state level with Federal support and oversight:

1. Property insurance in metropolitan areas affected by riots (FAIR plans).

Of the seven general criteria that have been established for evaluating all types of actions that might be taken to deal with various aspects of the products liability problem, the criteria* that are particularly relevant in considering special insurance mechanisms are:

1. Will the mechanism increase the availability of "affordable" products liability insurance?
2. Will it place the incentive for risk prevention on the party or parties who are best able to implement risk prevention techniques?
3. Will it minimize the sum of accident costs, litigation, and accident prevention costs?
4. Will it avoid unreasonably depriving an injured party of his or her products liability insurance?

Of course, the first and last of these objectives are intertwined. To the extent that any contemplated action would assist in meeting the first criterion it would also assist in meeting the last, and this is the primary objective of any "residual" or remedial market mechanism. On the other side of the coin, care must be taken to design any such mechanism in a way that creates the least possible negative impact on incentives for loss prevention and on overall costs and is as equitable as possible to all parties concerned. There is nothing inherent in the nature of any of these special mechanisms that will automatically increase loss prevention incentives or reduce overall costs, though it is possible to build in loss prevention incentives.

Considerations related to these general criteria that apply specifically to evaluating alternative special mechanisms are:

* - The other criteria are: (1) apparent feasibility of the alternative, (2) assure injured party of reparations, and (3) expedite the reparation process.

1. The ease with which insurance can be obtained from the mechanism and its administrative efficiency
2. The procedure for settling claims
3. The overall financial stability of the mechanism.

A further consideration which applies only to special insurance mechanisms is the extent to which the mechanism disrupts economic relationships outside the products liability area (e. g. , the ability and willingness of insurance companies to underwrite related lines of business).

There are three types of special insurance mechanisms that might be considered. These are:

1. Assigned risk plans
2. Governmentally operated insurance fund or company
3. Pooling mechanisms, such as joint underwriting associations and reinsurance facilities, and government reinsurance or excess of loss insurance.

Within the framework of any of these three general configurations, there are some fundamental issues that need to be addressed and resolved. These are:

1. Should the mechanism be operated in a way that provides a continuing subsidy for the insured as a matter of policy? If so, how much should that subsidy be? Who should provide it?
2. Whose capital should be at risk? Regardless of whether a subsidy is intended, the pricing of product liability insurance, particularly for difficult-to-place risks, is a highly judgmental matter. Therefore, there is a good chance that substantial losses might be incurred in a particular year even if the pricing is adequate on a long-run basis. If such losses occur, who will absorb them? What will happen to any profits that are earned?
3. Will availability of coverage be guaranteed to any firm that makes application or will certain selection procedures and criteria be applied? What will these criteria be? Will they include an individual evaluation of the risk? Who will determine whether satisfactory loss prevention measures have been taken both initially and when policies come up for renewal?

4. What classes of coverage will be provided? Will it be products liability only? Will it include completed operations? Will it include other types of liability coverage normally provided as part of a comprehensive general liability policy?
5. Will the mechanism operate in competition with the private insurance system? Or will it operate as a monopoly for certain types of products or certain industries or for firms below a certain size?
6. Will the mechanism be implemented by state or Federal action, and will control over the mechanism rest with the state governments or the Federal government? Or will it involve some combination of the two?
7. Will the mechanism be permanent or temporary? If temporary, how will it be phased in and phased out? What will the trigger be?
8. Will the implementation or continuation of the mechanism be tied in any way to the enactment of changes in tort liability law, either at the state or Federal level, or both?
9. Who should operate the mechanism?

Each of these questions is discussed below as they apply to all governmentally initiated special mechanisms. Then, after describing alternative mechanisms, we will return to these considerations in discussing our overall conclusion.

SUBSIDY POLICY

The issue of whether a deliberate subsidy should be granted to certain firms or to the manufacturers of certain types of products has very broad implications. Essentially, it boils down to a question of whether there are certain types of products that are so valuable to society that their continued production ought to be encouraged even though society under the free market system may be unwilling to pay the full cost of the product. Uncontrolled, the subsidy concept would amount to providing government encouragement to the production and use of high-hazard products. It also could dampen the incentive to manufacturers to make certain that their products are as safe as possible. This, in turn, could lead to increasing subsidies if the effect of dampened incentives would be to increase overall product liability costs.

In our view, a deliberate subsidy would be justified only in a very unusual situation and, if then, only for a specific product where the benefit to the nation is broad-based and the comparative benefits and risks have been deliberately and carefully evaluated. Special mechanisms that have been designed to provide deliberate subsidies, such as Federal Crime Insurance and National Food Insurance, have involved safeguards that attempt to avoid increasing the overall exposure to risk and cost to society simply because a subsidy is available.

It is important to note, however, that a policy of providing no subsidy would mean that, over the long run, the cost of insurance to the body of policyholders covered through a special insurance mechanism would be roughly the same as it would be in the private insurance system, although specific rates for individual policyholders might be different.

WHOSE CAPITAL AT RISK?

The avowed intent of many residual market mechanisms is to avoid any continuing subsidy of the group covered. However, whether because of political considerations or the difficulty of predicting losses and, therefore, pricing properly, the actual experience has been that significant losses are often incurred under such arrangements, primarily because of adverse selection.

Considering this history and the fact that pricing products liability coverage in the current legal climate is an extremely difficult exercise at best, the question of who would be responsible for providing funds to cover any deficits is a very real issue. Should the funds of insurance companies and, therefore, of their policyholders and shareholders be at risk or should the governmental body mandating the program run this risk so that the cost of any unexpected deficits is borne by the taxpayers in general?

It is difficult, in our view, to develop any compelling justification for singling out the policyholders and shareholders of insurance companies to provide the risk capital for a mechanism that these companies do not control and, of course, insurance companies have persistently advanced this argument against both assigned risk plans and joint underwriting associations that make them responsible for bearing any losses incurred. The validity of their argument was sufficiently persuasive in 26 of the 28 states that enacted medical malpractice JUAs to convince those legislatures that the companies either should be allowed to offset against premium taxes any losses that they

might absorb through their participation in the JUA or losses should be recouped through a surcharge to the JUA policyholders.

CONDITIONS FOR AVAILABILITY

While the idea of guaranteeing availability of products liability coverage has an appealing ring, there are two questions that tend to make it a complex issue from a practical standpoint.

The first is that society is unlikely to benefit if insurance is made available to firms that do not exercise reasonable care in the manufacture and labeling of their products and thereby unnecessarily endanger the user. Thus, there would appear to be a need for an inspection and at least some latitude for risk selection to avoid supporting and encouraging irresponsibility.

The second question is whether the mechanism would be designed to cover situations in which insurance is technically available but at a cost that the applicant considers unaffordable. Interviews and questionnaire responses indicate that this type of situation is more predominant in the products liability field than one of absolute unavailability. The question of judging "affordability" becomes fairly complex because it involves the questions of whether the cost can be passed through to the customer and, if not, why not. It may also involve a question of preference for corporate risk bearing versus risk transfer. If the difficulty is one of product substitutability, perhaps the net effect for society as a whole of a high insurance premium for the more hazardous product would be beneficial.

Simply a large percentage increase in premiums or a premium that is a substantial percentage of sales may not necessarily mean that the coverage is truly unaffordable. While certain criteria or standards might be defined to help deal with the "affordability" question, this would seem to be an issue that would have to be decided on a case-by-case basis. Furthermore, premiums charged by the residual market mechanism might turn out to be no lower than the premiums that were considered unaffordable.

TYPE OF COVERAGE INCLUDED

Since products liability coverage is generally written as a part of a comprehensive general liability or commercial multiperil policy, an argument can be made that it would be less disruptive for any special mechanism to provide all types of general liability insurance coverage, rather than product liability only. Separating the coverages would force insureds to deal

with separate sets of people on such matters as claims handling, could lead to confusion, and would add to the cost of the system.

However, it would be difficult to justify broadening the role of mechanism designed to meet a problem that arises strictly because of difficulty in the product liability arena. From the standpoint of the insurance industry, a broader role would be viewed as more disruptive than separating out the product liability coverages from those coverages which are usually written in conjunction with it. As a practical matter, however, it probably would be necessary to include coverage for completed operations along with product liability in the scope of any special mechanism since completed operations coverage is provided along with product liability coverage as a standard procedure.

COMPETITIVE VERSUS MONOPOLISTIC

A monopolistic mechanism would have some clear advantages from the standpoint of pricing and financial stability because it would be more likely to include a sufficiently large number of policyholders and data on their loss experience on which to base pricing decisions (although this would also depend on whether the mechanism operated at the federal or state level.) Also, it would automatically protect the mechanism against one of the problems that plague residual market mechanisms - i. e., a tendency to attract only the worst risks (adverse selection).

On the other hand, trying to establish a monopolistic mechanism would require overcoming some very difficult definitional problems concerning businesses that would be included and those that would not. Generally, the attitude of businesses toward their insurance relationships is that they would prefer dealing with the same agent and company from whom they have purchased other coverages if the arrangements are reasonable. Moreover, a competitive approach preserves the opportunity for the private market to develop solutions to the problem while a monopolistic approach would encourage private insurers to drop consideration of products coverage permanently. Thus, a monopolistic approach to the products liability problem would seem appropriate only if it is clear that the private insurance industry is inherently incapable of coping with this type of risk.

FEDERAL VERSUS STATE

One of the most difficult issues that must be addressed in the formulation of an involuntary insurance program is the question of state versus Federal

action. The interstate nature of the products liability problem faced by large manufacturers and distributors of goods would suggest that uncoordinated efforts by individual states could result in significant conceptual and administrative difficulties. This is one of the most important distinguishing features between the products liability and medical malpractice insurance problems.

The issue can be made clear by hypothesizing a particular manufacturing situation. Assume that a manufacturer has plants in several states that are used for the purpose of assembling the finished product, several other plants that manufacture component parts, and a distribution network that includes not only a number of states, but also other countries. With which state mechanism would the separate risks be placed? Will the business be forced to deal with all state mechanisms under a rule by which responsibility is allocated on the basis of where the product is sold? Many manufacturers would find this to be extremely burdensome. Not only would the manufacturer be forced to do business with many entities (each with its own separate requirements), but many would not be able to provide the information necessary to do so. Manufacturers frequently cannot document the actual distribution of the product to the consumer. And, subsequent resale of durable goods would be a particularly thorny issue. Furthermore, states have differed with regard to the amount of insurance that involuntary mechanisms are required to provide in the case of medical malpractice, and the same situation might arise in products liability. If this occurred, the manufacturer would face increased difficulties in trying to coordinate additional coverage purchased in the voluntary insurance market.

One might conclude that the obvious answer to these difficulties would be that the manufacturer insure its responsibility through the mechanism in the state in which the manufacturing is completed. This would reduce, but not eliminate, the basic problem. Further, it is possible that states would impose a requirement that businesses demonstrate their financial responsibility. Unless there is cooperation among states, the definition of what satisfies the financial responsibility requirement will vary. If the state in which the product is manufactured does not provide insurance in its association that will satisfy the financial responsibility requirements of all the other states in which the manufacturer does business, additional problems are introduced.

Therefore, it seems clear that any action that is taken to implement a special insurance mechanism should be either exclusively at the Federal level or should involve Federal-state cooperation to ensure uniformity among states but should not be attempted independently on a state-by-state basis.

PERMANENT VERSUS TEMPORARY

There is considerable reason to believe that the problem of availability of product liability coverage is one of discontinuity. The sudden surge of product liability claim costs took insurance companies by surprise, and the reaction has been particularly severe because the problem has been coupled with problems of regaining overall profitability and maintaining financial solidity.

For these reasons, there are strong arguments for limiting the life of any governmentally mandated special mechanism if one is needed, just as many of the mechanisms that have been established for medical malpractice insurance have a limited life-span.

In limiting the life of such a mechanism, however, it is important to recognize there are actually two points of termination. The first is the time at which either the legislated time period is reached or the regulatory authority determines that there is no longer a need for the mechanism. The effect of this is that no new policies would be issued and existing policies would not be renewed. Despite this, the mechanism must continue to exist until its obligations are fulfilled, which will not occur until the last claim is settled. Thus, the mechanism may continue for several years after its formal termination. The length of time will be determined not only by statutes of limitations and the time required for adjudicating existing claims, but also the precise responsibilities assumed under the insurance contract. It is important to realize that the actual financial results will not be known until the mechanism terminates as an operational entity.

LINKING THE MECHANISM TO TORT REFORM

One of the chief concerns expressed regarding the establishment of any special insurance mechanism is that it might be viewed as the solution to the product liability problem by itself, when in fact it does not deal directly with the underlying causes of rising claim costs. Thus, the mere establishment of the mechanism might reduce public pressure for modifications in the tort law that might help alleviate the fundamental problem.

A possible way of allaying this concern would be to pass legislation that would require that modifications in the tort law be enacted either before the mechanism is implemented or to avoid discontinuing the mechanism. Because of the interstate character of product liability coverage, this linkage would be meaningful only if a Federal tort law were enacted or a uniform state law established.

RESPONSIBILITY FOR OPERATING THE MECHANISM

Special residual market mechanisms are operated in a variety of ways. Some are operated by a group of lead insurers, who are willing to participate. Some involve the mandated participation of all insurance companies. Some are operated by a "servicing carrier," either on behalf of a group of insurers or the government. Some are operated directly by the state or Federal government, primarily the Federal Insurance Administration.

One problem that has arisen with regard to the use of servicing carriers is concern that the carrier might incur liability for improper pricing, underwriting or claims handling that leads to operating losses for the mechanism.

Since product liability insurance calls for a high level of skill in carrying out underwriting, loss prevention, claims handling and legal defense functions, the question of who would have the capability to operate the special mechanism effectively is critical. This would be particularly true for a mechanism designed to provide primary coverage.

ASSIGNED RISK PLANS

It appears that the principal reason why assigned risk plans have been considered as a potential remedy to the product liability problem is that such plans have historically been the most widely adopted means for solving - or at least mitigating - problems of price or availability of private passenger automobile insurance. The key characteristics of assigned risk plans as they have been developed for private passenger automobile insurance are described in the first section below. Subsequent sections discuss potential advantages and problems with assigned risk plans as applied to product liability insurance and explain why we have concluded that no further consideration of this remedy is warranted.

CHARACTERISTICS OF ASSIGNED RISK PLANS

Three key characteristics described almost all of the assigned plans which have been developed for the private passenger automobile insurance market. These are

- ¶ Guaranteed access to insurance market
- ¶ Insurance carrier participation based on participation in voluntary market
- ¶ Risks assigned to individual companies, no pooling of results.

Guaranteed Access To Insurance

Most automobile assigned risk plans provide that any driver with a valid operating license is guaranteed access to at least specified minimum levels of insurance coverage. Drivers are generally required to prove that they have made reasonable efforts to obtain insurance through the voluntary market, and that such insurance was either unavailable or available only at a price higher than that which would be charged through the assigned risk plan.

Carrier Participation Based on Voluntary Writings

Assigned risk plans have traditionally been operated at the state level with insurance company participation in a plan being a requirement for licensing to write private passenger automobile insurance in a state. The

allocation of assignments among participating companies is based upon each company's share of the voluntary private passenger automobile insurance market in the state, generally as measured by written premium income. In many states, a company may receive credits against its obligation by voluntarily insuring a driver that has been placed in the assigned risk plan or a driver with specified high-risk characteristics, such as the "youthful driver."

No Sharing of Results

When a driver in an assigned risk plan is assigned to an individual insurance carrier, that carrier is individually responsible for all aspects of insuring the risk, including paying any losses which might arise. There is no pooling or sharing of overall results among participating carriers. This is the most important feature distinguishing assigned risk plans from other residual market mechanisms. Limits of liability provided are generally low, however, which limits the impact of any one loss on the assigned insurance carrier.

POTENTIAL ADVANTAGES OF ASSIGNED RISK PLANS

The principal potential advantage of an assigned risk plan for product liability insurance would be that it would directly address the problem of insurance availability. As discussed below, however, this potential advantage is heavily outweighed by problems which would accompany this approach.

POTENTIAL PROBLEMS OF ASSIGNED RISK PLANS

At least four serious problems argue strongly against adoption of an assigned risk plan for product liability insurance, each of which is discussed separately below:

- ¶ Political rather than actuarial determination of rates and coverage
- ¶ Disruption of traditional agency-company relationships, contributing to poor service for policyholders
- ¶ Difficulty in determining market share basis for allocating risks, coupled with the fact that fewer companies write product liability insurance than write automobile insurance

¶ Random allocation of potentially severe financial burdens among carriers, which has been characterized as a kind of "Russian roulette."

Political Rate and Coverage Determination

Insurance carriers have long argued that rates permitted and coverages mandated in assigned risk plans developed for private passenger automobile insurance have historically been determined more by political rather than actuarial considerations. The result, these carriers argue, has been chronic losses in the plans, and enforced subsidizing of poor drivers by good drivers, including those that may be unfairly forced into assigned risk plans when the market is tight. A similar situation could well develop in a product liability assigned risk plan, particularly since rates are necessarily a highly judgmental matter.

Disruption of Agency Company Relationships

Since assigned risks are allocated on a random basis, it is quite likely that an insured's agent may have to deal with a carrier with which he has little or no other business, complicating normal transactions considerably. This complication, combined with the money-losing nature of most assigned risks, gives little incentive to the carrier to provide a desirable level of service to these risks.

Difficulty in Determining Allocation Basis

Given the myriad ways in which product liability insurance can be written and recorded, it would be extremely difficult if not impossible to develop an equitable basis for allocating assigned risks among companies. As described in a previous chapter, product liability may be written as part of a general liability policy or combined with other insurance in a business package. Moreover, even if the products portion of any insurance coverage were recorded separately, the question would remain as to which product classifications to use in the allocation mechanism. If all products were grouped together, a carrier could be assigned a risk in an industry with which it is totally unfamiliar, with resulting loss of most of the potential benefits from

the carrier's loss control or claims administration services. If a pool were based on more specific product classifications, carriers would have an incentive to reduce their voluntary writings in the classes with the biggest problems. This would aggravate existing availability problems and reduce the prospects of ever finding a more permanent solution in the voluntary market.

A particular problem that would apply to product liability coverage is that a small carrier could be assigned a risk considerably larger than it is prepared to absorb or even to cede to others.

Random Allocation Of Financial Burden

A final objection to assigned risk plans is that the absence of a loss-pooling mechanism leads to a random allocation of losses. This aspect is often criticized in automobile plans, but it is far more severe with the higher limits in product liability coverages.

NEXT STEPS

The serious problems discussed above in applying the assigned risk concept to product liability insurance have led us to conclude that no further consideration of this remedy is warranted.

GOVERNMENTALLY OPERATED

INSURANCE FUND OR COMPANY

In discussing governmentally operated insurance funds or companies, we are referring to governmental organizations which act as primary insurance carriers, selling insurance to policyholders either directly or through agents or brokers. These funds could be operated either in competition with private insurance companies or as exclusive providers of a specific type of insurance in a specific geographic area. The key distinguishing feature of governmentally operated insurance companies, as defined for discussion here, is that the mechanism disrupts the normal business relationship between policyholders, agents or brokers, and insurance companies. The most important change from traditional practice is that the governmental organization, rather than the private insurance industry, establishes the rate to be charged. In many cases, the government's rates are lower than those private industry would charge. Governmentally operated funds are discussed below in two sections. The first describes several recent cases where either a state or the Federal Government has established its own insurance fund. The second section explains our conclusion that governmentally operated primary insurance companies have less potential application to product liability insurance than do reinsurance or excess insurance mechanisms described in a subsequent section of this report.

FEDERAL CRIME INSURANCE

The Federal Government has established programs to insure numerous types of risks ranging from bank failures and default on student or veteran's loans to war or expropriation risks. Of these, perhaps the direct primary insurance program most relevant to the product liability area is the Federal Crime Insurance Program, established under Title VI of the Housing and Urban Development Act of 1970. The program provides robbery and burglary insurance to residential (\$10,000 per occurrence maximum) or commercial (\$15,000 per occurrence maximum) policyholders in states where the Federal Insurance Administration has determined there is an insurance price or availability problem. At present, the coverage is available in 18 states and the District of Columbia. Policyholders may purchase crime insurance from any insurance agent or broker licensed in the state in which the insured's premises are located.

A significant feature of the program is that in order to be eligible for Federal crime insurance, an insured must comply with several explicit security precautions, which are described on the application form. For example, all exterior doors to a residence must be equipped with either a dead bolt or self-locking dead latches with a "throw" of at least one-half inch. ("Throw" is the distance the bolt or latch protrudes from the body of the lock when in a locked position.)

The program explicitly expects to subsidize policyholders by offering coverage at "affordable" rates. These rates, which are generally lower than those available from private carriers, are intended to reflect what a reasonably prudent property owner would expect to pay, ruling out environmental factors (e.g., "high-crime areas") the individual cannot control himself.

The Federal Crime Insurance Program has had limited acceptance. In 1976, the program has written approximately 30,000 policies, of which some 30 percent are business risks. However, this does not mean that risks are finding coverage in the private market, but rather that many risks are simply not being insured. It has been estimated that as little as 5 percent of the burglary and robbery losses in the United States was covered by insurance. (See Mark R. Greene, "The Government As An Insurer," The Journal of Risk and Insurance, page 4034).

STATE FUNDS

Reflecting their traditional lead responsibility in insurance regulation, the states have been quite active in establishing primary insurance funds. Examples include the 6 monopolistic and 12 competitive state workers' compensation funds and, more recently, at least 2 medical malpractice funds.

The workers' compensation funds operate almost the same as private compensation carriers do, and the attraction of state funds in this area appears to be decreasing. No new state workers' compensation fund has been established since 1925. In 1965, Oregon passed a law eliminating the monopoly status of its state fund, and private carriers gained 43 percent of the market within 5 years.

There are two state medical malpractice funds. In Indiana, health care providers may seek coverage from the fund after being rejected by

two insurers. The fund is supported by both premiums and state tax revenue and managed by the private insurance industry.

Michigan's Brown McNeely Insurance Fund is a more complex mechanism. A category of health care providers may petition the insurance commissioner to activate the fund on its behalf. If the commissioner determines that insurance is not available or is too costly in the voluntary market, then the fund will be activated. The commissioner sets the rates to be used by the fund. To date, physicians comprise the only group that has qualified. The fund insures about 2,500 physicians. Approximately 5,000 physicians continue to be insured by private insurance companies.

The Brown McNeely Fund has no surplus, i.e., relies on premium income to meet claims costs, with no buffer fund to absorb inherent premium inadequacies or adverse fluctuations in claims experience. Instead, the legislation provides that if the fund incurs a substantial deficit then it can assess physicians. In fact, it can assess both the physicians that are insured by the fund and those that are insured by private insurance companies. In the event such an assessment is required, it will give rise to very difficult problems of collection.

LIMITED POTENTIAL APPLICATION TO PRODUCT LIABILITY INSURANCE

At this point, the justification for a governmentally operated fund providing primary insurance appears to be limited, particularly when compared with the pooling alternatives described in the following section. As described there, excess or reinsurance programs have the potential to provide all the benefits that a primary program could provide, and have an additional advantage in that they can be phased out if and when the problem diminishes far more easily than would be possible with a primary insurance program.

POOLING MECHANISMS

The creation of an association or pool for the purpose of underwriting a troublesome line of insurance is a well-established approach. Underwriting associations are often created by insurers to develop expertise in a particular line of insurance, such as marine and aviation. In the case of perils such as flood and nuclear and medical malpractice, pools or associations have been either mandated by state governments or have been stimulated by Federal action.

MANDATED MECHANISMS

The main purpose of a mandated joint underwriting association or reinsurance facility is to make insurance readily available to persons who have difficulty obtaining such coverage. Examples of mandated pooling mechanisms include: (1) FAIR (Fair Access to Insurance Requirements) plans; (2) automobile joint underwriting associations and automobile reinsurance facilities; and (3) medical malpractice joint underwriting associations. Each of these programs is organized on a state basis and requires insurers licensed to write a specified line of business to put their capital and surplus at risk by accepting policyholders or types of insurance that they would normally decline to write. In each case, this coercion has been perceived by the various states and by many insurers as having a valid social purpose.

The philosophy that underlies the pooling concept is that there is "security in numbers." That is, insurers are less vulnerable to realizing the full catastrophic potential presented by the higher-risk policyholder if its exposure to loss can be effectively spread among many insurers in an efficient manner. Actually, this pooling of results arrangement is a simple extension of the key principle of insurance - risk sharing, i. e., many premiums are pooled to offset the loss costs of a few. Usually, the larger the pool, the more accurately loss costs can be estimated. Pools of undesirable risks can result in massive losses for their members, as the "proper premium" may not be charged due to the underwriters' inability to estimate it or because it is too high for the policyholder to pay.

Existing association programs may be illustrative of the types of plan which could be designed to mandate the availability of product liability insurance.

FAIR plans exist in 28 states. They were created in the mid-1960s to make insurance available to property owners in deteriorated inner-city areas. These plans have also been used in seven states to provide insurance in beach areas prone to severe windstorm damage. While the operating details vary from plan to plan, generally insurers writing fire and multiperil package policies in the state are assessed on a formula basis at the start of the year. At year end, if a deficit develops, additional assessments are made. These plans are generally managed by "servicing" insurers who perform the operating functions for the FAIR plan. Due to the catastrophic hazards of riot and civil commotion, the Federal Government has made riot reinsurance available for those plans that meet established criteria (e.g., the plans must be under the direct control of the state's insurance regulatory authority. And they must not deny coverage to anyone without first making a physical inspection of the risk and determining whether the risk meets sound underwriting requirements). In addition, the state must provide back-up participation in any reinsurance losses incurred.

The act which made this reinsurance available (Urban Property Protection Act of 1968) was amended in 1970 (P. L. 91-609) to provide for FAIR plan reviews by the Federal Insurance Administrator to verify that the plans are in fact: ". . . effectively making essential property insurance readily available." Thus, FAIR plans are arrangements involving insurers, the state, and the Federal Government, in which the states are regulators and coordinators and the Federal Government is a reinsurer and regulator.

The coverage offered by FAIR plans is substantially the same as that available in the traditional market, but the limits of liability are far less. For example, in the New York plan only \$900,000 will be made available for risks of the best construction, \$600,000 for brick buildings and up to \$400,000 for frame buildings. Policy premiums begin with the same rates charged by insurers. These rates are then surcharged to reflect the "high-risk" profile of the pool populations. These surcharges can exceed 200 percent.

Automobile joint underwriting associations and automobile reinsurance facilities have similar objectives. These plans were created in a few states to overcome the problems perceived with Automobile Insurance Plans often referred to by their former name, "assigned risk plans."

The automobile joint underwriting associations are "service carrier pooling systems," which means that writers of voluntary private passenger automobiles must put their capital at risk just as in a FAIR plan. Access to the pool is gained only through a "servicing" carrier. However, no governmental reinsurance is provided. These plans are in effect in Florida and Missouri.

"Reinsurance facilities" have been created in four states (Massachusetts, North Carolina, South Carolina, and New Hampshire) for high-risk private passenger automobile risks. The key distinction between these plans and the FAIR and automobile JUAs is that policyholder services are provided by all auto insurers so that the normal relationship between the insurance company, agent, and policyholder need not be disturbed. In fact, the policyholder may not know that he is being reinsured.

In addition to FAIR plans and high-risk automobile facilities (JUAs and Reinsurance facilities) mandatory medical malpractice associations have been created in at least 31 states. However, the potential number of JUAs is much larger since many state insurance regulatory agencies believe they possess sufficient authority to establish a JUA without the necessity of specific legislations. Given the national scope of distribution for most products, a state JUA would have little impact on the product liability insurance problem.

The major difference between the malpractice JUA and the other mandatory associations is that attempts have been made to involve insurers with the requisite risk selection, pricing, and claims handling skills that are needed in this highly sophisticated line of insurance. As mentioned earlier there has been some reluctance on the part of insurers to become servicing carriers because of concern about possible contingent liability for any operating losses incurred by the association.

GOVERNMENTALLY SUPPORTED MECHANISMS

Pooling arrangements that involve voluntary participation by private insurers have also been initiated or supported by reinsurance at the Federal level. Two pertinent examples are arrangements that provide for: (1) flood insurance, and (2) insurance for nuclear energy facilities.

National Flood Insurance

The National Flood Insurers Association (NFIA) was created in 1968 by insurance companies to cooperate with the Federal Government to carry out a program created by the National Flood Insurance Act of 1968. The immediate objective of this program is to make flood insurance available in some 20,000 flood prone areas. However, the most important objective is to encourage loss prevention efforts through improved land use planning and control in these areas.

Just as the Civil Aeronautics Board (CAB) sets aircraft component standards, the authors of the flood program take a strong position concerning loss control. Thus, insurance will only be made available to communities that agree to take steps to minimize flood damage, e.g., require buildings in flood zones to be elevated and floodproofed. Residents are required to purchase available flood insurance in order to qualify for loans backed by federal agencies such as the Veterans and Federal Housing Administration.

An additional objective of the program is to develop sufficient information for determination of actuarially sound insurance rates. At present, rates set by the FIA are not actuarially determined and are subsidized by the Federal Government. However, the NFIA plans that no subsidy will be required after 1983.

As of May 31, 1976, over \$21.8 billion flood insurance is in force. One hundred twenty companies have joined the NFIA, all on a voluntary basis. Risk bearing participants share in the profits and losses. Profits are limited to 5 percent of premiums. Reinsurance is purchased by NFIA from the Federal Government which takes over after a combined loss and expense ratio of 125 percent has been reached in any one year. Additionally, a reserve account has been established to set aside profits in excess of 5 percent in good years to offset losses in bad years.

Nuclear Excess Insurance

Insurance for nuclear reactors is provided by the Nuclear Energy Liability Property Insurance Association (NELPIA), a voluntary joint underwriting association comprised of approximately 115 domestic and more than 200 foreign carriers. NELPIA provides electrical utilities with \$175 million of property insurance covering damage to the nuclear facility and \$125 million of liability insurance. In addition to this primary liability coverage, however, utilities also purchase \$435 million of excess liability coverage from the Nuclear Regulatory Commission, leaving each nuclear facility with a total of \$560 million in liability coverage. (The liability limits are based on the lifetime of the individual facility, but it is anticipated that if a facility were to experience an incident resulting in claims amounting to anything near the \$560 million limit, there would not be a subsequent incident.)

The Nuclear Regulatory Commission, a Federal agency, charges the utilities an annual premium of \$30 per thermal megawatt (\$90,000 for a large nuclear facility) for the \$435 million of excess coverage. However effective in mid-1977, a new program will take effect whereby the NRCs exposure will be reduced substantially. Instead, all NELPIA policyholders (approximately 60 facilities) will pledge to pay \$5 million each in the event of a major nuclear loss at any one facility. The NRC will retain the final layer of coverage, up to \$560 million. This is an excellent example of the flexibility provided by a governmental excess insurance program. As more experience is gained with loss history and loss control techniques, the private sector is able to assume an increasing share of the insurance responsibility.

EVALUATION AND CONCLUSIONS

If convincing evidence is developed that the problem of availability and affordability has reached a point where society is suffering and there is no indication that insurers and insureds are willing to move voluntarily to meet the problem, some governmental initiative will be needed.

In considering the alternatives available, it is worth reviewing some of the specific characteristics of product liability coverage and the product liability problem that should be taken into account in choosing the route to take.

1. There are a number of indications that the availability problem could be temporary. The rapid rise in product liability claims costs caught insurers by surprise at a time when the industry was experiencing disastrous overall underwriting results and worsening premium-to-surplus ratios. Improvement in this situation, especially if combined with significant tort reforms, could resolve the availability crisis quickly.
2. Product liability insurance is almost invariably sold and serviced in conjunction with other coverages.
3. Effective loss prevention and claims handling in the product liability field are extremely important and require a significant level of expertise; experienced, qualified people to perform these functions are not easy to find.
4. Product liability coverage usually cuts across state lines; even if the manufacturer does not have operations in more than one state, it is likely that his products are in use in several states.

Taking these special characteristics into account, we conclude that:

1. It is very important that any action taken should minimize the disruption of normal relationships between insureds, agents or brokers, and insurance companies. This consideration would eliminate assigned risk plans and primary government insurance funds from consideration. It also would eliminate a joint underwriting association operating with a single servicing carrier.
2. Any effective action will require some type of Federal initiative. Separate plans established on a state-by-state basis would lead to enormous complexity and confusion for insureds and others involved.

3. The program should be one that could be effectively administered by a relatively small staff. Since a high level of expertise is required and since there is considerable likelihood that the need for the program will be temporary, it would be both impractical and undesirable to build a large staff to carry out the functions of any newly created mechanism.

All of these conclusions argue for a mechanism that would provide either reinsurance or excess insurance or both through the Federal Government. Models for this type of mechanism include: (1) the National Flood Insurance Program and (2) the NELPIA/Nuclear Regulatory Commission model.

The National Flood Insurance Act provides an interesting model in that it is an example of Federal reinsurance being used to help stimulate voluntary cooperation on the part of private insurance companies. However, in that case, since the purpose of the program was to provide insurance that private companies had no interest whatsoever in writing on their own, it was expected that the arrangement would be long-lasting.

The primary distinction between the product liability situation and the NELPIA/NRC model is that an association was formed to provide coverage, and the Federal Government through the Nuclear Regulatory Commission is simply providing excess insurance over coverage provided by a single insurer (NELPIA). In the case of product liability, assuming that one of the aims of the program would be to minimize disruption of existing relationships, it would be necessary to deal with a considerably larger number of insurers.

Another possible model is the Federal riot reinsurance provided in connection with FAIR plans. Following that model, however, would require state action for implementation and would disrupt existing relationships between primary carriers and insureds. The first requirement would build in an implementation delay that could be costly, and the second would make it very difficult to terminate the arrangement.

Since a key consideration again would be to minimize the disruption of existing relationships, we believe the mechanism should provide only excess insurance and facultative reinsurance rather than primary coverage. As our underwriting file review confirmed, it has not been common for primary insurers to obtain facultative reinsurance for product liability risks, although there are indications of increasing use of facultative reinsurance. It is more common for insureds through their agents or brokers to purchase excess coverage over the limits of liability the primary carrier is willing to

provide. In fact, one of the current problems faced by many small and medium-sized manufacturers is that they are having difficulty obtaining primary coverage with loss limits high enough to meet their needs and, at the same time, are finding that excess writers are unwilling to go as low as they formerly did in the limits over which they are willing to write. This gap in what is sometimes referred to as the "working layer" needs to be filled, and it could be filled by establishing a Federal agency or facility empowered to write excess product liability coverages. If the facility were also empowered to provide reinsurance, it could help meet the needs of captive companies as well.

It would be important that any such agency not operate in a way that reduces the incentive to control losses or impairs the general effectiveness of the private insurance system. Therefore, it should not accept risks automatically, and it should not price its policies so as to subsidize the insured and unfairly compete with other excess writers. Also, the coverage it provides should be limited to products liability and completed operations and should not include other forms of general liability coverage.

To fulfill the kind of role contemplated, it would be necessary that any agency performing this function be equipped to make sound underwriting and pricing decisions. Thus, it would have to have a small staff of underwriters who are highly knowledgeable in the product liability field. This staff would also need to determine by industry and by company size what limits of liability it would be willing to accept and over what primary insurers it would be willing to write. The limits it offers to write should represent a reasonable balance between meeting the availability need, on one hand, and unnecessarily intruding into the private insurance system and thus making withdrawal more difficult on the other.

As was discussed earlier, the pricing of product liability business is far from an exact science, and this clearly applies in the case of excess coverage. Therefore, even with a highly qualified staff, there is a good chance that operating losses would be incurred. Rather than attempt to apportion any such losses among insurance companies, it would seem more logical that they should be absorbed from Federal funds but that every effort should be made to recoup any losses from operations in subsequent years.

If such an agency were established with a limited life-span - say 3 years - there would be an automatic trigger to review the need for it and to decide whether it should be renewed or terminated.

ADVANTAGES OF FEDERAL EXCESS INSURANCE AND REINSURANCE

The chief advantage of this proposal over doing nothing at all is that, although it does not guarantee insurance availability, it could help ease the availability problem significantly for small- and medium-sized manufacturers because it would reduce the burden of uncertainty for primary writers by allowing them to limit their liability. (While claim frequency has been growing, it is claim severity that is the primary source of uncertainty.)

The chief advantage over other possible governmentally-initiated mechanisms is that it probably would be the least disruptive to the private insurance system, the least dangerous in terms of potential for weakening loss control incentives, and the easiest to phase out if availability should cease to be a problem in this line in the future.

DISADVANTAGES OF FEDERAL EXCESS INSURANCE AND REINSURANCE

The major disadvantages of this proposal in comparison with relying entirely on voluntary action are: (1) it would require finding a highly qualified staff; (2) it would put taxpayers' funds at risk; and (3) there is some danger that it could disrupt the private insurance system and weaken loss prevention incentives if pricing and underwriting decisions are unsound.

The chief disadvantages compared with other possible mechanisms are that: (1) it does not do anything significant to increase the incentive to control losses (though it might have a modest effect by requiring inspection reports on all business it writes and compliance with sound standards); and (2) it does not guarantee availability, even for the responsible risk, but rather assumes that a primary writer can be found who will take the risk if the primary loss limit can be kept reasonably low.

Finally, like all the other mechanisms discussed in this section, a Federal excess insurance program would not address the problem of overall insurance cost. Rather, it would provide temporary relief from availability problems until longer term loss prevention and tort reform efforts help control the overall cost of product liability insurance so that it can be handled entirely within the private voluntary insurance market.

CONCLUSION

After weighing these advantages and disadvantages, our overall conclusion is that the provision of Federal excess product liability insurance and reinsurance would be the best mechanism to use if it is clear that there is a serious availability problem and that insurers are not taking action to deal with it voluntarily.

There are several issues that must be resolved in order to develop appropriate legislation needed to create such a mechanism on a standby basis.

1. Who should operate the mechanism? Should it be the Federal Insurance Administration or some other agency?
2. What specific requirements should be met by an insured or insurer in order to qualify to obtain reinsurance or excess insurance through the mechanism?
3. What standards will be established to make certain that the primary carrier assumes a reasonable proportion of the risk?
4. Should reinsurance be made available to captive insurance companies? Should excess insurance be made available to firms that do not have primary coverage? If so, what standards should be applied to avoid abuse?
5. What underwriting standards and procedures should be followed? How should rates be determined? How should loss reserves be determined?
6. Is it feasible and desirable to tie the possible extension of the use of the mechanism in each state to the enactment of specified tort reform legislation?

We recommend that criteria and a procedure be developed for inclusion in the legislation which could be applied to determine whether the mechanism should be activated.

We suggest that the procedure might include the following steps:

1. Through state insurance departments, trade associations, and other interested organizations, systematically collect the names of firms that say they are having availability problems.

2. Follow up these reports with telephone interviews to determine the exact nature of the problem - i. e. , is coverage not available or is it a matter of cost? If cost, what was the lowest quotation as a percentage of the previous premium and as a percentage of the firm's annual sales? What insurance companies were asked to quote?
3. If the evidence accumulated through this monitoring indicates that the problem is growing, hold a public hearing and invite all firms identified as having availability problems. On the basis of evidence brought forward at this hearing, determine whether to activate the standby mechanism.

The procedure should also define who will be responsible for making the decision to activate the mechanism. Since this would be an important decision, we recommend that it be assigned to a high level in the Executive Branch of the Federal Government. We also urge that it not be made until possibilities for special pooling arrangements on a strictly voluntary basis as described in the next section have been fully explored.

While these issues are not easily resolved, we believe it is important to move forward promptly to address them in order to be prepared to deal quickly with a serious availability problem if it should develop.

A.2 VOLUNTARILY INITIATED

INSURANCE MECHANISMS

Voluntary arrangements have been made by both insurers and non-insurance organizations for the purpose of underwriting exposures that were once regarded as unique and unusual. These programs sometimes developed due to the real or perceived unavailability of "affordable" insurance. For example, product liability insurance on aircraft components was felt to be "unwritable" by the insurance industry when airplanes were first developed. Now, however, specialized voluntary pools have evolved to provide hundreds of millions of dollars of insurance for rates of less than 5 percent of sales.

In other cases, pools or associations developed to help traditional insurers tap foreign markets. Examples include AFIA (formerly the American Foreign Insurance Association) and American International Underwriters, Inc. (AIU). These companies were established for the purpose of writing property liability insurance in markets that would be difficult for any one company to approach efficiently.

Other types of pools have evolved for the purpose of developing specialized loss control, underwriting, and claims handling skills. Examples include the American Hull Syndicate, a pool of United States insurance companies created to write ocean marine insurance, principally the hull, rather than the cargo risk; the Oil Insurance Association; the Railroad Insurance Underwriters; and the Foreign Credit Insurance Association, to name a few.

Another form of voluntary non-governmental risk funding involves joint action by insureds. For example, several of today's major insurance companies were formed around the turn of the century by groups of woodworkers (e.g., Lumberman's Mutual Insurance Company and Kemper Insurance Group). The Liberty Mutual Insurance Company, a major writer of miscellaneous liability insurance, was formed by a group of loss control-conscious manufacturers in 1912. More recently, insurers have been formed by over 400 companies to insure, primarily, their subsidiaries' international property and in some cases, liability exposures. These companies are referred to as "captive" insurers. Captive companies have also been formed by trade associations for the benefit of their members. VERLAN, formed by the paint and varnish association, and a captive formed by the association of soil engineers are two examples.

These two types of voluntarily initiated insurance mechanisms, pooling by insurers and joint action by insureds, are discussed more broadly in separate sections below.

POOLING BY INSURERS

Insurance company pools usually are formed to create a market for insureds and to enable insurers who do not possess the requisite specialized skills needed to select and price the risks involved and handle the resulting claims to participate in the market.

These pools usually require companies that participate to place all business of a specified type with the pool and they often prohibit members from writing this business on their own. This feature helps preserve the pool from being used to write only poor risks.

The United States Aircraft Insurance Group (USAIG) is a good example of a voluntary insurance company pool. USAIG and its similarly organized competitor, Associated Aviation Underwriters, provide the principal market for aviation insurance in the United States.

The USAIG is composed of a group of property and casualty companies. It began operation in 1928. The Group is managed by United States Aviation Underwriters, Inc., a management company organized to operate the specialized insurance company (USAIG) on behalf of many insurers who are far less expert in underwriting the aviation risk. This company, for example, has six product liability underwriters, all of whom are attorneys. Several are licensed pilots as well. The company has developed highly skilled accident investigators. USAIG performs most of the functions of an insurer on behalf of its members. It issues policies in their name and is compensated by receiving a proportion of underwriting income. The practice of issuing policies in its members' names preserves their competitive identity.

Overall, the group approach to aircraft insurance: (1) enables the development of a highly skilled staff; (2) concentrates statistical and claims information efficiently in one place; (3) provides for an efficient spreading of risk, as the financial resources of one or more companies can easily be made available for any one policyholder. The specialization provided by USAIG and AAU has permitted less skilled insurers to participate efficiently in this attractive insurance market. On the whole, the arrangement has worked rather well, as more capacity is available today than ever before and aircraft insurance rates have steadily declined since the inception of this form of insurance after World War I. Government involvement in this market is limited to the provision of war risk reinsurance.

It would be possible to establish a product liability insurance association similar in operation to the aircraft pools. One approach could be as follows.

The formation of a voluntary pool would provide a short-term industry solution to the emerging crisis for smaller manufacturers of industrial machinery and equipment and other "high risk" products.

The objective of the pool would be to provide general liability insurance, including product coverage, for smaller firms who have been unable to obtain coverage at an affordable price.

The pool could be composed of at least 10 of the top 15 writers of miscellaneous liability insurance. Qualifying business would be submitted to a central underwriter (within each member company) who would determine that reasonable manufacturing standards are being followed, set a rate and collect statistics on a standard format for exposures, premiums, and losses by type of product to establish a data base for ratemaking. This underwriter would contact his counterpart at each of the other member companies and arrange facultative reinsurance. Each member would agree to take at least a prearranged portion of the risk, e.g., 10 percent. A slip containing basic risk facts (e.g., prior experience, loss control report including the extent to which the prospective policyholder is in compliance with industry standards, D&B) and the proposed rate would be circulated by the initiating underwriter (similar to Lloyds market). Each designated member underwriter would initial, signifying agreement with the rate or suggest a more appropriate rate. The majority would govern.

The initiating insurer would bear all the expenses of writing the business and perform the required loss control, claim handling services, and premium account services. Reinsurers would pay an overriding commission to help offset the originating insurer's expenses.

An operating committee composed of the designated underwriters (or their back-ups) from each company would meet monthly to discuss specific risks, operating problems, and overall results. At that time, and accounting would be made of the performance of the pool as of an agreed-upon cut-off date (e.g., 1 month prior to meeting).

The approach described, being a fundamentally voluntary industry effort, would not necessarily require any governmental assistance. However, its formation and operation could possibly be facilitated by government clarification of any potential anti-trust impediments.

JOINT ACTION BY INSUREDS

Policyholders can band together for the purpose of either purchasing insurance as a group as was done by the National Machine Tool Builder's Association during the 1974-76 period, or they can pool their resources and form trade association insurance companies, frequently referred to as "captive" insurance companies. Large corporate organizations also form captives to reduce their cost of risk. At this level, pooling only occurs within the corporate family, as no other organization's capital is "at risk." As the purpose of insurance is to provide financial security through risk sharing among many participants, "captive" risk funding mechanisms have significant limitations.

Group insurance programs became a popular way for major insurers to expand their premium writing during the mid-60s. Recently, however, many of these programs have been cut back. The reason for this reversal was that many group programs developed during this period were "marketing" methods for fueling growth and underwriting standards were often relaxed to achieve a high penetration of the group. This led to the absorption, by the insurer, of a relatively large share of policyholders that had experienced difficulty buying insurance on their own. Thus, when insurer's losses began to soar during the 1973-75 period, many of these programs were given far tighter underwriting scrutiny. This resulted in the termination of many programs. The leverage that the group could exert over the insurer, due to the large block of premiums it controlled, was often not sufficient to avoid the plan's termination.

As discussed in Chapter 3, sound industry-insurer programs have been developed, but the cornerstone of these plans is their reliance upon effective loss control standards for the design, testing, fabrication, and distribution of their products. The industrial grinding wheel program (discussed in Chapter 3) is a good example.

Since the end of the second World War, organizations have focused their attention more carefully on their insurance costs. Also during this period, major corporations have expanded the scope of their efforts to the point where many now operate on a multinational basis. Both of these forces have combined to generate great interest in the formation of a captive insurance company. Captives can reduce their parent company's insurance expense in primarily three ways: (1) reserves established for paying formerly uninsured losses can be converted to captive premiums and deducted as an operating expense for tax purposes; (2) the captive can buy insurance from

reinsurers (reinsurers will often not write insurance on a direct basis. Reinsurance is often lower cost insurance as reinsurers pay a commission of 10-20 percent to the primary insurer. Also, they will frequently share their profits with the captive via "contingent commission" arrangements.); and (3) captives can be used to generate investment income.

During our interviews we learned that captives are most frequently used to insure property exposures. They are less often used for liability insurance due to the high risk involved. However, some use is made of captives for high risk exposures as the layers of excess insurance available change. For example, according to our interviews with insurance brokers and risk management consultants, the "market" for "reasonably" priced pharmaceutical products liability coverage exists over the \$5 million level. This level is \$1 million for industrial machinery and equipment. Both could change overnight depending on the next court award or claim settlement, as this excess market is very fluid. Within the eight selected product groups, we found that captives have been used for product liability by pharmaceutical manufacturers (one company reportedly retains the first \$12 million in its captive), large chemical manufacturers, a group of medical device manufacturers, and automobile manufacturers. A member of a machine tool trade association has, reportedly, formed a "Bermuda captive"; however, only one of its members is currently insured in the company due, in part, to the unavailability of reinsurance and to tax matters.

Companies of this type are often organized in a country that does not have a tax treaty with the United States, such as Bermuda. These "off-shore" locations are also attractive as they do not have sophisticated regulatory mechanisms with which the insurer must comply. For example, a United States insurer must adhere to a plethora of state financial and operating regulations that have evolved to protect policyholders. Of course, this "protection" is not as meaningful when the insurer's sole policyholder is its parent organization.

Within the past 5 years, the Internal Revenue Service has sought to eliminate the tax deductibility of premiums paid to captives on the theory that these payments are not made for the purpose of shifting or transferring risk to third parties. Currently, this point is being tested in the courts in a suit involving the Ford Motor Company, an owner of several Bermuda-based insurers. Captives have also been under attack by the Financial Accounting Standards Board (FASB). A recent ruling by this important organization (FASB Ruling Number Five) generally supported the IRS position.

Recognizing the impediments that exist to forming a captive in the United States, the Colorado legislature created a law for the purpose of facilitating the formation of these organizations. The Colorado Captive Insurance Company Act was signed on March 9, 1972. To date, relatively few corporations or trade associations have formed Colorado captives.

This is due, in part, to the still significant advantages available in Bermuda concerning capitalization, investments, and reserving practices. And, the use of a "captive" (due to the considerable financial and administrative investment involved) is limited to the larger organizations who, for the most part, have already formed successful captives in Bermuda.

Several suggestions have been made concerning the removal of tax and regulatory impediments to permit manufacturers to form captive insurers in the United States. To do this, they reason, a Federal chartering procedure should be established to eliminate the necessity of gaining regulatory approval in every state. The Colorado Captive Insurance Company Act of 1972 could be used as a "model" Federal law to achieve this purpose. Two issues that will need to be resolved, however, are: (1) should the IRS permit the deduction of premiums paid and surplus contributions to Federally chartered captive insurers, but not for those paid to "offshore" insurers, and (2) should the enabling legislation provide for the supervision of these companies and for "guarantee" funds by some appropriate Federal agency.

Regardless of the answers to these important questions, it is apparent that joint risk-funding action by policyholders is likely to have little, if any, impact on the availability of "affordable" product liability insurance, as this approach requires significant assets and expertise, as well as the availability of reasonably priced reinsurance. Thus, this approach will do very little to aid the small manufacturer of high risk products as they neither have the necessary resources nor are they attractive prospects for reinsurers. It is possible, however, that trade associations or other policyholder groups could amass the necessary resources to insure a large enough portion of their exposures to attract a reinsurer. This idea, however, requires further study, as the Colorado Captive Act has a special provision for association captives which has, to date, not been used. This implies that the key difficulties that have inhibited the formation of association captives may not be regulatory in character.

One of the key assignments for the task force established to develop legislation for a standby governmental insurance mechanism (described in

Section A. 1 above) should be to determine what additional actions could be taken to encourage greater use of captives to help resolve product liability problems.

A.3 MODIFIED PRODUCT LIABILITY COVERAGE

Changes in coverage terms and conditions are often considered by underwriters as a method for making coverage for extremely high hazard risks more easily available. At various times many potential product liability coverage changes have been considered by the Insurance Services Office, their members, and by independent insurers. Certain changes are currently under review by ISO. They can be categorized as follows:

¶ New Exclusions

- Punitive damages
- Cancerous diseases
- Products made in violation of Federal Product Safety Laws
- Loss of use not caused by physical injury or destruction to property
- Products made by discontinued joint ventures or partnerships.

¶ Revised Terms and Conditions:

- Include defense costs within the limit of liability
- Separate the products and completed operations hazards
- Revise products recall exclusion to clarify the "no coverage" intent.

Additionally, the shift from the "occurrence" form to a "claims-made" form, a change that has been made by some insurers on their professional liability policies, has also been suggested as a way to ease the product liability problem.

Most of these changes would be applicable in special individual risk situations where the underwriter and the policyholder could agree that it would be financially imprudent or contrary to public policy to offer the coverage in question.

While each of these coverage changes should be given some consideration, in our judgment, three appear most promising. They are: (1) the adoption of the "claims made" approach; (2) inclusion of defense costs within the limit of liability; and (3) exclusion of punitive damages. Each would reduce the degree of uncertainty the underwriter faces concerning the total amount of potential claim payments. Hence, they could, if adopted by most insurers and approved by state regulators, encourage underwriters to provide coverage for products they currently are reluctant to write and they could cause rates to be reduced, at least to the extent premiums currently reflect charges for: (1) injuries incurred but not reported during the policy year; (2) loss adjustment expenses which, in conjunction with losses, could exceed the limits of liability; and (3) punitive damage awards.

DESCRIPTION OF THE REMEDIES

To the extent that underwriters are wary of providing coverage due to the uncertainty concerning future loss costs, certain coverage amendments could stimulate them to view prospective policyholders more favorably.

Historically, however, insurers have been reluctant to amend their policies to restrict coverage. This is due, in part, to the need for most insurers to agree upon the specific amendments to be made. As liability insurance offers a catastrophe potential for many types of products, this insurance is purchased in multimillion dollar "layers" from more than one company. Thus, if any of the many insurers involved has a different form of coverage, loss settlement could pose extensive problems of nonconcurrence for both the insured and the various insurers. A brief description of each of the coverage changes follows.

"Claims Made"

Currently, product liability coverage applies to any legitimate claim that is made against the insurer due to "bodily injury" and "property damage" which occurs during the policy period. The claim can be made on the policy during or after the expiration of the policy. This can result in substantial uncertainty for the underwriter for two reasons. First, the manufacturers of durable goods accumulate exposure to loss as any of their outstanding products could result in an injury during the policy period. This works a particular hardship on some manufacturers and their underwriters as they could be subject to losses from very old machines (30-40 years), as well as from an ever increasing number of new machines. The second major source of uncertainty arises from the characteristics of

certain products to cause an injury that may not be discovered for many years. Certain pharmaceutical products and organic chemicals are two examples.

If the policy terms and conditions were changed to apply only to claims brought or made during the policy period regardless of the time of injury, the latter form of uncertainty could be diminished but not the former. Claims-made policies would only cut down the uncertainty for products that involve long time spans between the manifestation of the injury and the claim. The point in time when the injury is manifest is determined by the insurers involved and, in some cases, by judicial decree. Lloyds of London are the only major underwriting group which writes product liability coverage on a "claims-made" basis. They amended their form in 1970.

A quite different approach from either the current "occurrence" policy form or the "claims-made" form has been suggested as a means of ensuring that claimants injured by products manufactured by companies that have gone out of business are compensated. This approach would tie coverage to a specific product or group of products manufactured during the policy year. Thus, all machines manufactured during 1976 would be insured by the policy in force during 1976, even if the machine caused a bodily injury in 1996, notwithstanding the fact that the manufacturer may have been liquidated in 1977.

Inclusion of Defense
Costs Within the
Limit of Liability

Currently, most insurance policies providing liability coverage agree to pay settlement and defense costs in addition to the limit of liability stated in the policy. In fact, the most recent version of the Comprehensive Liability Policy January 1, 1973, states the following

Supplementary Payments

"The company will pay in addition to the applicable limit of liability:

- (a) all expenses incurred by the company, all costs taxed against the insured in any suit defended by the company, and all interest on the entire amount of any judgment therein which accrues after entry of the judgment and before the company has paid or tendered or deposited in court that part of the judgment which does not exceed the limit of the company's liability thereon:"

The policy also covers other expenses such as premiums on appeal bonds, expenses incurred for the first aid of others and expenses incurred by the policyholder at the request of the insurer.

During our interviews we learned that some insurers would like to include defense costs within their limits of liability. This would enable them to dispense with claims that they must now continue to defend. In some cases this can result in a particularly unprofitable situation for the insurer as the policyholder could subsequently be buying his insurance from some other insurer. This latter point is significant in that the defending insurer can no longer recoup even a part of his claim cost. The original insurer cannot abandon his defense efforts because he had agreed, in his policy, ". . . to defend any suit against the insured seeking damages on account of . . . bodily injury or property damage." This obligation expires following the exhaustion of the company's limit of liability by payment of judgments or settlements. However, if the insurer abandoned his defense obligation, he would either violate the terms of the policy or upset the management of the defense effort for himself and other insurers in the cases where layers of coverage are involved.

Exclusion of Punitive Damages

Nearly every insurer we interviewed expressed a dislike for punitive damages. Most, however, felt that their policies should provide coverage as long as this anomaly in the civil law exists. Currently, the insuring clause in the most frequently used liability policy refers to all damages and does not distinguish between compensatory and punitive damages. Thus, when punitive damages are awarded, and their payment by an insurer is not ruled to be contrary to "public policy," they will usually be paid by an insurer. In some jurisdictions, the award of these "extra damages" is prohibited by state statute; in others, insurance companies are not permitted to pay them as they were meant to punish the policyholder for "willful or wanton" negligence, a fact that could void coverage as the policy only covers occurrences that are "neither expected nor intended from the standpoint of the insured." But in others, awards are made for both compensatory and punitive damages without distinguishing the amounts that apply to each; thus, the entire award is eligible for payment. Sometimes, insurers pay punitive damage awards under a "reservation of rights" and seek a separate hearing on the "public policy" question.

The states are by no means consistent among themselves or from court to court within a given state. Thus insurers, due to the absence of an explicit exclusion, never know if they will be required to pay sums on behalf of their policyholders that have no relationship to the claimant's injuries but are simply intended to punish the policyholder.

POTENTIAL ADVANTAGES

The advantage of a "claims-made" policy arises from its ability to reduce the underwriter's uncertainty regarding the loss costs arising from any one policy year. This advantage, as explained, is far greater for those products that involve a long time lag between the manifestation of injury and claim, e.g., pharmaceuticals, certain products related to the medical arts, organic chemicals.

Uncertainty regarding the primary insurer's loss costs is also reduced by the inclusion of defense costs within the policy limits and by excluding punitive damages.

Limiting loss costs to a "sum certain" would be advantageous for those products that involve exceedingly high defense costs due to their complexity and concomitant need for highly specialized defense strategies. Products in this category include critical automotive components, toys, firearms, elevators, organic chemicals, cosmetics and drugs, and new (not previously existing) products.

The exclusion of punitive damages would probably not result in a reduction of product liability insurance rates. This view was expressed by insurers we interviewed. Insurers have not paid many punitive damage awards, although this could change if awards become more frequent. The feeling was expressed, however, that their existence does delay settlements as claimants "hold out" in the hope that large punitive damage awards may be made. This has the effect of increasing loss adjustment expenses and, eventually, product liability premiums.

POTENTIAL DISADVANTAGES

Most coverage changes per se have been resisted by insurers and their policyholders as the main purpose of the coverage is to protect policyholders

- Source: ISO General Liability Circular GL-72-59; "Product Liability Insurance - A Study Countrywide" by Norman Nachman, page 29.

against the consequences of their negligent acts. Also, as courts interpret an intent and meaning of policy wordings, precedents are established which insurers then use to inform their rate-setting and risk selection judgments.

Adoption of a "claims-made" approach would, as explained, ease the underwriter's policy pricing function. Theoretically, a problem could arise regarding injuries reported after a manufacturer has gone out of business. Claimants could be stranded without compensation for their injuries. This is particularly true for consumers in the marketplace, as workplace claimants could still make claims against their employers for workers' compensation. It is unclear how important the distinction between "claims made" and the current approach is as no statistics concerning unenforceable product liability judgments are readily available. Conceivably, the problems involved with bringing suit against a defunct company is affected less by the presence or absence of coverage than by the practical problem of finding someone to sue.

An important disadvantage related to the idea of tying coverage to the products manufactured during the policy year is the practical difficulty of determining when a product was made. Further, underwriters would have great difficulty determining what premium to charge for particularly durable products due to the need to project loss costs far into the future.

The primary disadvantage arising from the inclusion of defense costs within the limit of liability is that excess insurers do not contemplate this cost in their rating procedures. This change would simply shift the payment of these costs from the primary insurer to excess insurers, adding administrative costs along the way. In the case where excess insurers are not involved, pressure would be placed upon the insured to purchase adequate limits. The pressure could cause an insurance availability problem for some policyholders as the inclusion of defense costs in their annual aggregate limit of liability could cause this limit to be exhausted sooner than it otherwise would. This, in turn, would require these policyholders to buy higher limits of liability, if they could be found.

The exclusion of punitive damages from liability policies would place policyholders in the position of having to accumulate their own financial resources, thus reducing their productive capacity.

RECOMMENDED ACTION

On balance, coverage changes should probably be disregarded as "remedies" as they do not appear to significantly impact the established criteria at this time. Their impact on the cost and availability of insurance is likely to be minimal (with the exception of certain product groups) according to the underwriters we contacted. For all products, "punitive damage" change shifts the burden of product liability loss to manufacturers or injured persons and hence, it is difficult to see any significant benefits arising from their implementation. It is possible that this shift could stimulate more caution on the part of manufacturers and consumers, but they are not professional risk bearers and do not have the accumulated surplus and reinsurance capabilities that would permit the efficient absorption of a major loss.

A.4 - EXPANDED PRODUCT LIABILITY

DATA GATHERING REQUIREMENTS

Underwriters, regulators, and insurance producers each wonder about how much products liability insurance is actually written, the losses this business has generated, and how these losses and premiums are spread among the more than 400 product classifications. Currently this information is available for only a fraction (about 10 percent) of the estimated volume of products liability insurance. Thus, underwriters and their rate-making organizations have little guidance on what rates to charge. Regulators do not know the extent to which financially troubled insurers may be increasing their proportion of this increasingly unstable business. Finally, producers cannot be any more certain about the financial stability of insurers than the regulators and the underwriters themselves.

During our interviews, we learned that insurers have only a vague idea about the volume of their products liability business. For years this line of business has been included with other exposures, thus data coding and reporting systems have not kept pace with the increasing importance of this line of business. Due to the probable magnitude of this line, the disturbing trends revealed by the fragmentary data that are available and the widespread concern expressed by governmental, industry, and legal observers, the nature and scope of the products liability insurance business should not be allowed to remain a mystery.

DESCRIPTION OF THE REMEDY

Expansion of the data gathering and reporting requirements for products liability insurance simply involves reporting to regulators and rate makers the exposures, premiums, and losses for this business as is done for other major lines of insurance such as workers' compensation and commercial automobile. Nothing more extensive is required. Products liability insurance should be given the same treatment afforded medical malpractice insurance beginning in 1975. This is reasonable because, as reported by The Bureau of Domestic Commerce in their 30-day study, "the product liability . . . problem is potentially more serious and complex than for medical malpractice coverage." This conclusion was, in part, based on the fact that "premium volume for medical malpractice insurance is estimated to be only about half that for product liability insurance (about \$750 million in 1975 compared with \$1.6 billion for product liability in the same period)."

There are essentially two types of statistics which need to be provided for products liability. The first concerns accounting statistics. The second involves data for rate making.

Accounting statistics are produced uniformly by insurers in compliance with the annual reporting requirements specified by the National Association of Insurance Commissioners (NAIC). These data are displayed in a document called the Annual Statement and are used by state insurance commissioners to evaluate the solvency of the insurer. The main mission of state regulators is to protect against insolvencies and to ensure fair treatment of policyholders and claimants. The Annual Statement does not contain exhibits which display calendar year premiums, losses, and loss ratios separately for products liability. Rather, these data are included in the category called "liability other than automobile or medical malpractice" (pages 6-9, and 14 of the Statement). Similarly, "Schedule P" (pages 37-43 of the Statement), an exhibit that displays how liability results in a given policy year change as reserved loss amounts are actually paid to claimants in subsequent years as suits come to trial and are settled, does not break out products losses from other nonauto, nonmedical liability losses. Displaying these data separately would aid insurers, regulators, security analysts, and producers in performing their function more effectively.

The second category of statistics that need to be produced are used for rate making. These data include exposures (e.g., units produced, receipts, sales) premiums and losses and loss adjustment expenses for each product classification. Thus, the insurer can compare the losses he expects with the actual performance statistics and determine the adequacy of the current rate level. Currently, these data are gathered by insurers and reported by many of them to the Insurance Services Office (ISO). This organization provides extensive statistical rate making and research services for its insurance company members. Products liability insurance is one of the areas in which it is involved. ISO gathers data in sufficient detail for rate-making purposes for only a fraction (in terms of premium volume) of the products liability insurance currently written. Detailed reporting is available for the "manual" rated classes only. Although plans for expanding the data reporting requirements are under way, the manual rated classes account for an estimated 10 percent of the products liability exposures. The remaining 90 percent is available, in part, but only in summary form - e.g., exposures are not reported by product classification for (a) rated products.

The expansion of the product liability rate making system suggested by ISO will, to the extent it is implemented, improve the underwriter's ability to

determine a proper rate for the products he is insuring. The approximate scope of these extensions will have the effect of increasing the rate making data base as follows

	<u>% of Total Liability*</u> <u>Products Liability Exposure</u>
1. Current Procedure	
1.1 Manual Classifications	10%
2. Proposed Expansion	
2.1 (a) Rated Risks	30%
2.2 Commercial Package Policies	30%

* - Source: ISO

The remaining exposures (30 percent) are written in composite, loss rated on a large risk, or on an (a) rate basis. To deal with this problem, composite rating will only be permitted for products liability coverages as of January 1, 1977, for large risks, i. e., manual basic limits premiums in excess of \$100,000.

Unless the net effect of these changes will be to strengthen substantially the insurance industry's products rate-making ability which will be reinforced by their other activities aimed at increasing the timeliness and responsiveness of this increased flow of data.

Thus, the major area for consideration concerns the expansion of the NAIC Annual Statement for collection of insurer products liability data.

POTENTIAL ADVANTAGES

The advantages of collecting products liability data via the NAIC Annual Statement include the following:

1. It is the only reliable source of this data on a state-by-state, company-by-company basis.
2. No other complete source of products premiums and losses exists; thus, it is likely to be the most economical and effective approach.
3. Insurers, due to their increasing concern about products coverage, will probably be receptive to a uniform data gathering approach as this information would provide a basis for comparison and analysis not otherwise available for very little or no extra effort.

There are two primary benefits flowing from both the expansion of the NAIC Annual Statement format and the ISO rate-making data base respectively. The former will enable regulators and investors to assess the impact of this highly volatile line of insurance on a given insurer's surplus, thus forewarning any financial strains. The ISO improvements will materially aid underwriters with their determination of a fair and accurate premium, i.e., a rate that is not unfairly discriminatory, inadequate, or excessive.

POTENTIAL PROBLEMS

The expansion of the NAIC format and the ISO data base will require additional reporting by insurers. This will add to their administrative costs, and, hence, must be borne by their policyholders. Also, the adoption of a sound definition of "products liability insurance" could prove administratively difficult as companies often write this coverage as part of other policies, and in conjunction with the "completed operations" hazard.

While the adoption of a far broader reporting basis for ISO statistics is necessary, it may not be sufficient for determining a truly fair and accurate premium. This is due, in part, to the fact that full statistical credibility is probably not within reach. The primary reasons for this include: (1) there are so many different products that the data available for any one may not be reliable enough to make confident statistical predictions; (2) the use of current sales as a basis for determining exposure ignores the loss potential arising from prior sales; and (3) data are collected on a countrywide basis. It therefore overlooks possible geographic variations.

A further problem that applies to both the NAIC and ISO alternatives is that considerable implementation time lags are inherent in both. ISO rate-making data are usually "aged" several years before it is used to allow for suits to come to court, the late reporting of losses and the sharpening of loss estimates. The NAIC (A1) "Blanks" subcommittee has been considering the expansion of the Annual Statement to include the changes discussed above (which reflect the suggestions made by the (D2) "Availability of Essential Insurance" subcommittee) since May of 1976. For change to occur, regulators would have to be convinced that the proposed amendments to the Annual Statement would help them meet their regulatory obligations more effectively.

RECOMMENDED ACTION

Both the changes discussed should be approved and implemented as soon as possible. While it is difficult to pinpoint the exact cost and benefits involved, it is also difficult to see how insurers, regulators, and insurance producers could not improve their services to the public with this basic, yet vital information. Without the data these changes would provide, it is not possible to answer the two most fundamental questions: (1) are the costs of product liability insurance fair and accurate; and (2) what financial impact does the writing of products liability insurance have on insurers? Further, the ISO closed claim study, when available, should be assessed and, if found valuable for determining the effectiveness of certain loss control techniques, considered for continuation.

A.5 - REMEDIES DESIGNED TO ELIMINATE

UNSATISFIED JUDGMENTS

Most of the insurance remedies for the "product liability problem" focus on increasing the availability of "affordable" product liability insurance. To the extent that they are successful in meeting this objective, these remedies would also help alleviate the potential problem of unsatisfied judgments. Two remedies have been proposed, however, which focus directly on the potential problem of unsatisfied judgments: mandatory product liability insurance, and unsatisfied judgment funds. The first section below discusses the reasons for considering these remedies, but points out that we have found little hard evidence of a need for governmental action at this time. The subsequent two sections comment separately on aspects related to the design of a mandatory insurance program and an unsatisfied judgment fund, should evidence ever develop that unsatisfied judgments may indeed be a serious problem.

LIMITED EVIDENCE OF NEED FOR GOVERNMENTAL ACTION

At present, the arguments favoring governmental action to eliminate unsatisfied judgments are based more on theory than on hard evidence of a major problem. Although there has been well-publicized talk of companies' considering declaring bankruptcy and reorganizing every 3 years to avoid long-life tort liability, or going bare and hoping a claim never arises ("one claim and we're a goner"), we have identified only 74 actual cases of manufacturers who have gone bare. ("Going bare" in this case means going without needed product liability insurance. The term is discussed more broadly in Chapter 3.) Moreover, there have been few, if any, reported cases where a legitimate product-related claim was uncollectible due to insolvency of a manufacturer.

Unsatisfied judgments may be less of a problem in products cases than in automobile or even medical malpractice because of the larger number of potential defendants as a result of two concepts which appear to affect product liability cases. The first is the "deep pocket" theory, which calls for damages to be paid by those who can best afford to pay. The second is "enterprise liability," in which any or all parties in a commercial distribution chain may be liable for damages caused by a product.

Fear of either of these concepts being applied by a court can have a significant effect on the defense strategy adopted by an insurance carrier for an insured only tangentially involved in a claim but nevertheless named in a suit. Several claims personnel interviewed expressed concern that carriers may sometimes settle out of court when they really should pay nothing, just to avoid being the one defendant left "holding the bag" when a jury reaches its verdict. As one claimsman puts it: "It doesn't matter if you're two steps removed from the immediate cause of loss. If everyone else has settled out before the jury reaches its verdict, you can be stuck with the whole award."

It is clear in many instances that if all the defendants in a suit banded together, they could possibly resist or sharply limit their overall liability. As several insurers point out, however, liability suits always contain an element of uncertainty, and the possibility of a major award. To date at least, it appears that individual defendants and their insurance carriers have tended, in cases where liability is in question, to spend more time fencing with one another to shift all responsibility to someone else, than they have spent cooperating to resist liability as a group.

The overall social desirability of these arrangements is certainly open to question. One result, however, is that, particularly in products cases, where so many parties are potentially involved, the chances of an injured party's being compensated for a loss are considerably greater than they would be otherwise.

At this point, we conclude that the governmental action required regarding unsatisfied judgments is limited to determining how many people are being left with no recourse when injured by a product manufactured by a company no longer in business or with inadequate insurance. The comments in the following section should be regarded as thoughts on designing a reparations program to eliminate unsatisfied judgments if the problem ever appears sufficient to warrant governmental action.

MANDATORY PRODUCT LIABILITY INSURANCE

The arguments for mandating that any manufacturer of a product with some possibility of causing injury should be prohibited from distributing it unless he can show he would be financially responsible in the event of such an injury are analogous to those used to justify compulsory automobile insurance legislation. There seems to be little dispute that parties engaging in activities which are potentially dangerous to others should be capable of paying for any damages they might cause.

However, it would be a complex undertaking to extend the concept of compulsory insurance to the products area in a meaningful way. What limit of liability would be adequate for "long life" products? How much aggregate coverage would be required? How high a retention would be acceptable? How would the mandatory purchase of products coverage be coordinated with other types of coverage, particularly other general liability coverage? Obviously, simply purchasing some products liability coverage would not provide sufficient protection for some companies, particularly smaller companies manufacturing hazardous products. In addition, there is the problem of determining what products must be covered. It appears that any mechanism for deciding this would be either so arbitrary or so complex that it might be necessary to require coverage for all products.

Moreover, it seems clear that government could not require every manufacturer to purchase products coverage without initiating action to resolve the problems surrounding this line of insurance. Such action would have to include long-term remedies, such as the tort reforms and workers' compensation or no-fault-related remedies discussed in other remedy evaluations, as well as actions involving insurance mechanisms which could expand insurance availability immediately.

UNSATISFIED JUDGMENT FUNDS

Unsatisfied judgment funds are a less drastic solution than compulsory insurance to the potential problem of uncompensated victims. However, in some instances where the concept has been applied, legislatures have also enacted compulsory insurance laws. For example, New Jersey requires insurance for all automobiles registered in the state, and has enacted an unsatisfied judgment fund to compensate victims with no other source of recovery.

A major question with such funds is their source of revenue. The New Jersey fund is financed by assessments against all liability insurers in the state, which means that all these companies' policyholders (personal and commercial) and/or shareholders provide the revenue base. For products, the potential revenue sources include a tax on the products themselves, a surcharge on liability premiums, an assessment against insurance companies, or possibly general tax revenues. There seems to be little basis for surcharging premiums or assessing insurance companies, other than convenience. It could be argued that a product tax is equitable, because the recipients of much of the benefit of the program would be owners or users of the product involved. However, bystanders or others completely uninvolved in either the purchase

or use of the product could also be beneficiaries of the unsatisfied judgment fund. Moreover, given the uncertainty as to how many, if any, claimants there would be against the fund, it seems unnecessary to collect the money (via a product tax) before any losses are incurred.

Thus, it seems that if it were determined that some form of unsatisfied judgment fund were required, general tax revenues would be the most equitable source of funding.

There are also the questions of the extent of damages to which a fund should be subject. Some limitation of common law damages would clearly be in order. For example, punitive damages would not be relevant, nor would there be any reason to refrain from crediting recoveries from other sources against the total amount of damages. Pain and suffering presents a more difficult question. However, if there is any context in which awards for pain and suffering could be limited to a set schedule, it would appear to be this one. For example, it could be argued that an unsatisfied judgment pain and suffering award should be limited to the amount of lump-sum awards available under workers' compensation laws for "disfigurement."

Finally, it seems that no benefit would be gained by making the fund subject to subrogation claims by workers' compensation carriers. Rather, the amount of compensation benefits paid to an injured employee should be deducted from the final award. However, the fund itself should retain the right to recover damages from those who caused the loss.

B - REMEDIES AIMED AT CONTAINING
PRODUCT LIABILITY INSURANCE COSTS

Remedies discussed in this section are those aimed at containing product liability insurance costs. Material covered includes:

- B.1 Expanded Loss Control Efforts by Insurers
- B.2 Changes in the Workers' Compensation System
- B.3 No-Fault Compensation Systems
- B.4 Mandatory Arbitration
- B.5 Tort Law Modifications.

Note: McKinsey & Company took lead responsibility among the contractors for B.2 "Changes in the Workers' Compensation System." For the other remedies in this section, McKinsey's responsibility was to provide comments, rather than full evaluations.

B. 1 - EXPANDED LOSS CONTROL

EFFORTS BY INSURERS

The ultimate remedy to the product liability problem is to reduce the number and severity of product-related injuries. Several sources have suggested that increased insurance carrier loss control programs could help accomplish this. However, although there is little debate as to the desirability of expanded and more effective loss control programs, we have found no concrete state or Federal governmental action we could recommend at this point (other than exhortation) that would increase the effectiveness of carriers' loss control programs in reducing product-related injuries. The first section below helps explain this by describing the limited role of insurance carrier loss control programs in determining product design and manufacturing practices. The second section discusses various specific proposals for governmental actions to expand carriers' loss control efforts, and explains why these proposals are not recommended at this time.

LIMITED ROLE OF CARRIERS LOSS CONTROL PROGRAMS

As described in Chapter 1, carriers' loss control personnel perform two related functions in surveying the loss exposure of a prospective or existing policyholder. The first is actually a part of the underwriting process aimed at determining whether the risk qualifies for coverage, what coverages are required, what risk classifications should be used, exposure bases, prior loss history, company operating practices, and so on. The second function is more specifically one of loss prevention. This can occur either concurrently with the initial underwriting investigation or during the policy year as safety inspectors or loss control engineers visit or contact policyholders to discuss loss prevention techniques and inspect the insureds' operations.

However, it must be recognized that the forces most effectively controlling the conditions under which products are manufactured are economic. Thus, a product's purchasers who create the demand for a manufacturer's output are in a strong position to determine the specifications for a product. This is particularly true in the case of product destined for the workplace, where the more knowledgeable purchaser is to be found. Unfortunately, purchasers occasionally buy unsafe products. This may be due to their lack of knowledge concerning the characteristics of a safe product or due to cost differentials between suppliers that place "too high" a premium on the safety features of their machines. In some cases, "dangerous" machines are the only machines available.

In each instance, the presence or absence of an insurance inspector may have little impact on the product design decision. If the manufacturer is given a series of recommendations by an insurance inspector, he may decide to implement them or he may not. In some cases, an underwriter may decide that coverage should be denied a manufacturer who refuses to comply with loss control recommendations. In other cases, he could also decide, due to the volume of premium written for other coverages or due to the importance to the company of the insurance agent involved, to provide coverage on one of several conditions: as requested; on a limited form of coverage; subject to a deductible; for low limits of liability; or for a high premium, notwithstanding the manufacturer's failure to observe sound loss control practices.

Thus, the decision to provide product liability coverage is complex and depends only in part upon the quality of the insured's loss prevention practices. This, as explained, is due to a variety of offsetting factors and sometimes to the fact that the inspections are not performed by an "expert." This latter point is significant because it is not sufficient simply to identify the need for improved product processes. The steps themselves must be identified, agreed to, and implemented. Even the product safety expert can do little more than aid this process. Finally, even if the insurer had the capacity to pinpoint needed improvements, the manufacturer can choose to ignore the insurer's suggestions and gain access to coverage elsewhere or simply decide to retain the risk himself.

For some products, however, these alternatives are not possible. For example, if a small manufacturer of vital aircraft components decides not to adhere to CAB standards or comply with certification programs, he will not likely survive. A government agency was the "prime mover" behind the development of sound standards for these products. For other products, this impetus has come from trade associations on their own (canners) or in partnership with an insurance company (abrasive grinding wheels). In all three instances (canned products, aircraft component, and abrasive grinding wheels) extensive efforts have been targeted toward the reduction of product-related injuries and has resulted in the availability of affordable insurance. In each case, however, the initial thrust was a direct consequence not of insurance carrier loss control programs themselves, but rather of the refusal of the insurance market as a whole to continue to provide insurance without implementation of effective standards governing the products' design testing, fabrication, and distribution (including packaging, labeling, instructions for use, and advertising).

Thus, when manufacturers feel a strong economic incentive to create a safe product and their customers have a similar incentive to use the product safely, insurance carriers' loss control efforts help focus their time and

attention on standard development and implementation enforcement. However, insurers' loss control programs should not be expected to bear the brunt of the overall loss prevention effort required by manufacturers and their customers if the goal of reduced product-related injuries is to be achieved.

GOVERNMENTAL ACTION NOT RECOMMENDED

Several ideas have been suggested for governmental action to expand insurance carriers' loss control programs, but none of these is recommended at this point. One suggestion is a law or regulation requiring that insurers take account of safety practices implemented by manufacturers when the insurers establish their liability premiums. No action is recommended in this area because this is already standard practice in the insurance industry. Credit for safety programs is granted in two ways. First, to the extent that previous safety programs have contributed to improved loss history, premiums are reduced through experience credits. Second, new or improved safety practices which should improve future experience are acknowledged through scheduled credits, generally up to a maximum of 25 percent of premium.

Other proposals for expanding carriers' loss control efforts revolve around the idea of requiring carriers to provide their insureds with assistance in developing loss prevention plans, or requiring carriers to certify the safety of specific types of equipment.

There are at least three strong objections to these approaches. The first is the problem of expertise. As discussed in Chapter 1, loss control personnel are often not "experts" in the processes or industries they are evaluating. Rather, with some exceptions, loss control personnel are usually generalists who understand the basics of sound operational practices and apply them in a wide variety of assignments. Requiring these people to assist in developing loss prevention plans for all risks would require a tremendous increase in the training and manpower currently devoted to loss control by carriers. The difficulties being encountered by OSHA as it attempts to develop sufficient staff to execute its safety enforcement responsibilities are evidence of this problem of expertise.

Moreover, the existence of governmental agencies such as OSHA and CPSC constitutes a second objection to mandating increased loss control efforts by insurers. These agencies are already working to develop and enforce safety standards, and their size and scope give them a much better opportunity to develop the required expertise than an individual insurance carrier would have.

A final objection is voiced by insurers who simply do not want to be forced into a policing role which would place them in opposition to their customers. They view loss control, in part at least, as a service to their customers, and they feel that their loss control efforts can be far more successful if they are able to work totally in cooperation with, rather than in opposition to, their insureds.

In summary, insurance carriers' loss control programs can play an important role in reducing product-related losses, and these programs should be expanded wherever possible. However, loss control personnel should not be turned into police officers. They should not be expected to bear the bulk of the product safety effort. That responsibility should remain primarily with the manufacturers and users directly involved with potentially hazardous products, and with the governmental agencies already established to enforce safety standards.

B.2 - REMEDIES INVOLVING CHANGES
IN THE WORKERS' COMPENSATION SYSTEM

Two specific remedies for the product liability problem have been proposed which involve changes in the workers' compensation system. The first is to prohibit subrogation in workers' compensation cases. The second is to expand workers' compensation to make it the sole source of recovery for workplace injuries. While most insurers interviewed favor both proposals, there is general agreement that only the second, making workers' compensation the sole source of recovery, would have a significant impact on the insurance market.

The limited data available at present support the general impression among most insurers interviewed that the bulk of workplace-based claims against manufacturers are being brought by the injured workers, not by workers' compensation carriers. For example, the recent survey by the American Mutual Insurance Alliance of claims closed during 1975 with total payments exceeding \$100,000 (a total of 79 claims in the eight companies surveyed) found that subrogation was responsible for the filing of only 3 percent of the claims, and partially responsible for the filing of an additional 8 percent. Workers' compensation liens constituted about 5 percent of the total payments in the sample, and about 10 percent of the payments made to claimants in work-related incidents. Preliminary data from the Department of Commerce's National Survey of Workers' Compensation Insurers provide additional evidence of the limited impact of workers' compensation subrogation. Respondents to the survey reported that all subrogation recoveries (not necessarily limited to products subrogation) amounted to approximately 2.19 percent of total losses paid in 1974, which was actually lower than the percentage recovered in the 2 preceeding years (2.37 percent in 1973, and 2.25 percent in 1972). Additional data on the impact of subrogation will be provided in the ISO closed claim survey, possibly as early as November 15.

Despite the limited impact of compensation carriers' subrogation on the overall product liability problem, many insurers would like to abolish it because they feel it is wasteful. One insurer's comment was typical: "Total loss dollars for the industry stay the same, but we all lose out because of the legal costs." Several insurers say they would like to avoid subrogation entirely, but feel compelled to pursue it due to competitive pressures.

The most direct method for eliminating subrogation would be to eliminate the subrogation clause from the workers' compensation policy. (This would

eliminate a carrier's right to recover compensation payments to an injured worker if the worker collects damages from a third party.) Although it is likely that some carriers writing more compensation than product liability insurance would object to this proposal, some of the strongest sentiment against workers' compensation subrogation has come from senior underwriters with major compensation carriers.

A proposal which would deter subrogation would be to permit third parties to raise employers' negligence as a defense in subrogation actions. The Federal Workers' Compensation Task Force is currently considering this proposal.

Because of the far greater potential impact on the product liability problem of making workers' compensation the sole source of recovery in workplace injuries, however, the following sections focus primarily on this aspect of workers' compensation reform. The first section describes the idea briefly, and the next two sections discuss potential advantages and problems with the idea. The final section outlines next steps suggested for both of the proposed workers' compensation related remedies.

Workers' Compensation Benefits

Establishing workers' compensation benefit levels which bear a reasonable relationship to predisability earnings and yet retain work incentives which discourage malingering is a most sensitive issue of public policy and is currently under study by the Federal Workers' Compensation Task Force. Workers' compensation benefit levels have increased substantially in recent years. Medical expenses are now almost completely covered, regardless of amount, and almost all insurers report that they have increased vocational rehabilitation efforts significantly. However, as shown in Exhibit B-1, there remains a wide range in benefit levels among jurisdictions today.

Although theoretically it would seem that increasing workers' compensation benefits alone should reduce the propensity of injured workers to file workplace-related product liability claims, this does not appear to have happened. We have found no evidence indicating that increasing the level of workers' compensation benefits reduces the tendency of employees to bring products claims, and most insurers interviewed feel there is no relationship. They point out that the potentially large awards in a products suit, combined with the contingent legal fee system, make it nearly impossible to reduce products claims simply by raising compensation benefits.

Nevertheless, it seems reasonable to expect that if workers' compensation were to be made the sole source of recovery for workplace injuries, some increases in benefit levels would be required, either on equity grounds to provide adequate compensation for the often severe injuries involving products, or on political grounds to induce employees and unions to accept the new recovery arrangement while giving up the right to litigate product related injuries.

Two procedures would be possible for increasing benefit levels. The first would be an explicit trade-off in which workers' compensation benefits would be increased for accidents caused on industrial equipment in return for prohibition of third-party claims against equipment manufacturers. The second procedure would be somewhat broader. Benefits for specific types of workplace injuries (particularly injuries involving permanent, partial or total disability), regardless of product involvement, would be increased in return for prohibition of third-party actions.

A full evaluation of these alternatives, including a meaningful estimate of the cost of appropriate benefit increases will require further analysis. Two preliminary observations, however, suggest that the second alternative, increasing benefits for specific types of injuries, may be preferred.

First, increasing benefits only for injuries involving "industrial equipment" raises the definitional problems (what is included under the heading "industrial equipment") which accompany many no-fault proposals. Moreover, it may be inequitable to allow higher benefits for an injury involving a product classified as industrial equipment than for a similar injury not involving such a product. (It has been pointed out that this is essentially the case today, with some workers able to add to their compensation benefits through a products claim while others cannot.) However, a major justification for this different treatment, that workers injured due to the negligence of others - i. e., product manufacturers - are entitled to higher compensation, is eroding as courts extend the doctrine of strict liability.

A second consideration favoring linking a proposal to establish workers' compensation as sole remedy to a broad plan for adjusting benefits is that the costs of any federal initiative to increase compensation benefits are likely to be substantial. As shown in Exhibit B-1, benefit schedules enacted by Federal legislation (Federal Employees Compensation Act, Longshoremen and Harbor Workers Act, District of Columbia) are three to five times higher than those provided by most other plans. Linking a sole remedy proposal to a broad plan for benefit adjustments would require the sole remedy proposal to be only one of several justifications for raising benefit levels.

WORKERS' COMPENSATION

TOTAL DISABILITY BENEFITS

<u>Jurisdiction</u>	<u>Maximum Weekly Payment</u>
<u>High Benefits</u>	
Federal Employees' Compensation Act	\$545.19
Alaska	358.00
Longshoremen and Harbor Workers' Act	318.38
District of Columbia	318.00
Illinois	205.00
Connecticut	189.00
Pennsylvania	187.00
Ohio	186.00
<u>Average Benefits</u>	
Wisconsin	\$176.00
Iowa	160.00
Virginia	149.00
Utah (Median Benefit Level)	131.75
New Jersey	128.00
California	119.00
Michigan	115.00
<u>Low Benefits</u>	
New York, Massachusetts, Georgia	\$95.00
Indiana	90.00
Texas	70.00
Oklahoma	50.00
Puerto Rico	28.86

Source: U.S. Chamber of Commerce computations

Note: States were selected to illustrate range of benefits available. Benefit levels shown were those applicable at the outset of 1976. Many states have formulas automatically raising benefits based upon state average weekly wage. Also, many states provide higher benefits depending upon the number of dependants in an injured worker's family. The Federal Employees Compensation Act permits maximum weekly payments up to 75 percent of gross wages. For all other jurisdictions shown the maximum is $66\frac{2}{3}$ percent. Finally, it should be noted that workers' compensation benefits are not subject to Federal Income Taxes, which raises the value of the benefits in relationship to an employee's take-home pay.

Legal Mechanisms

At least three legal mechanisms have been suggested for establishing workers' compensation as sole source of recovery. The first is a simple (in concept, if not in enactment) legislative change barring third-party claims in cases where injured parties are eligible for workers' compensation. This would extend the no-fault and sole remedy doctrines underlying the workers' compensation system to cover all parties potentially involved with a workplace injury.

The second mechanism is more targeted. It involves expanding the definition of "employer," or essentially extending the tort liability exemption granted to employers to include manufacturers and/or suppliers of durable goods used in the workplace. The definition of employer could be expanded to include any or all of the industries suffering a severe products liability insurance problem. These manufacturers could thus share in protection from tort claims given to employers as their part of the original workers' compensation "bargain" (guaranteed payment for all injuries in return for waiver of tort law rights). An employee's right to sue parties who cause him injury in a manner unrelated to product liability - e. g., a driver who negligently collides with the employee - would not be affected.

An example of a similar mechanism for establishing a single source of recovery for damages is the liability policy provided by the Nuclear Energy Liability-Property Insurance Association (NELPIA) to electrical utilities operating nuclear reactors. The named insured on the policy includes the utility along with all manufacturers and transporters of component parts for the reactor. Thus in the event of a loss, there would be no need to dispute the relative fault of various parties involved to determine responsibility for paying damages.

A third mechanism for establishing workers' compensation as sole source of recovery has been proposed by Professor Jeffrey O'Connell, who suggests that workers could be convinced to give up their third-party rights against employers' suppliers through collective bargaining, in return for a share of the savings which could result from reduced product liability insurance costs.

Mechanisms for Sharing Damages

Many feel that a third requirement for any proposal to establish workers' compensation as sole source of recovery from workplace injuries is a

mechanism for apportioning the damages for product-related injuries between manufacturers and employers. Professor Olson has suggested that workers' compensation administrative boards could equitably and efficiently meet this requirement. The expertise of such boards could be extended to evaluate equipment defects, and the boards could then decide not only the compensability of an injury, but also the relative responsibility of employer and manufacturer. The decision of a board could be established by legislation as binding, or the law could retain the option of judicial review. In this latter case, it would still be possible for manufacturers and employers to contract between themselves to abide by the decision of the workers' compensation board if an injury should occur. Thus, those who chose to could realize all the potential legal time and expense savings the revised system offers.

Using workers' compensation boards to apportion damages would require extending the expertise of these boards substantially. An alternative would be to permit employers (or their insurance carriers) who have paid compensation benefits for product-related injuries to seek contribution or indemnity from product manufacturers, through either the courts or arbitration. Although this would entail more litigation than would a system based on workers' compensation boards, the amount and cost of this litigation should be less than under the current systems for at least two reasons. First, the amount of damages involved could be limited to the level of workers' compensation benefits. There would be no prospect of large pain and suffering awards. Second, all attorneys involved would be employed by corporations, presumably with no contingent fee payments involved. These factors could reduce the incidence of so-called frivolous suits and facilitate agreements between employers and manufacturers.

Finally, it should be noted that some proponents of workers' compensation as the sole remedy do not agree that a damage-sharing mechanism is required. Their argument goes as follows: Even with an apparently simple mechanism such as that suggested above, the potential for added delay and expense outweighs any benefits fault sharing might have in terms of increased safety incentives for manufacturers. In their view, the principal incentive for workplace safety should be on the employer - the party with most control over the workplace. Increasing the employer's responsibility for workplace safety would increase his propensity to provide appropriate safety incentives to manufacturers through his purchasing decisions - the most powerful incentive available under our economic system.

ADVANTAGES OF ESTABLISHING WORKERS' COMPENSATION AS SOLE RECOVERY SOURCE

Establishing workers' compensation as sole source of recovery for workplace injuries can be viewed as a limited administrative version of the various no-fault systems proposed for product liability insurance. As such, it would have the principal advantages generally attributed to no-fault systems, including:

- ¶ Reducing uncertainty as to timing and size of payments to claimants
- ¶ Minimizing transaction costs in the overall reparation system
- ¶ Reducing or avoiding the stigma of liability or blame for injuries.

In addition, establishing workers' compensation as sole source of recovery could significantly reduce the product liability cost and availability problems for several of the industries currently most acutely affected.

Reduces Uncertainty

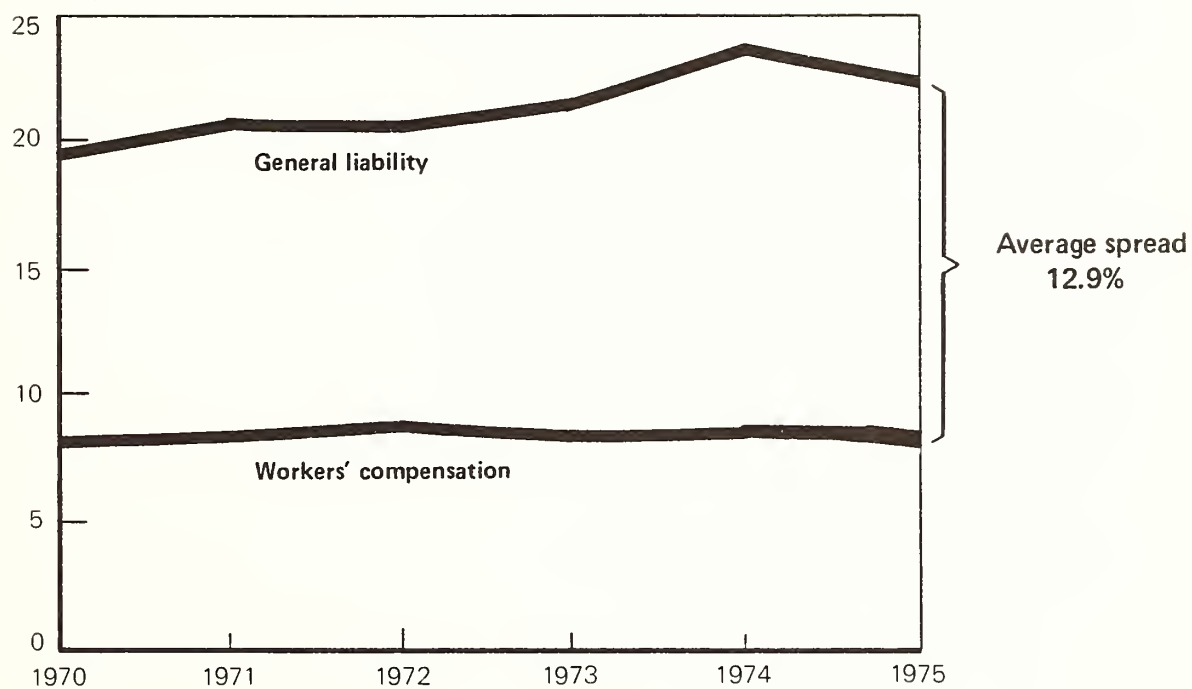
A principal advantage of the workers' compensation system is its predictability, both for employees and for employers and their insurance carriers. Many insurers point out that recent benefit improvements have made compensation an unprofitable line in some states. Yet, there is little dispute that, although costs may be high, they are at least predictable, or soon will be, once more experience is gained under the revised benefit structures. Making workers' compensation sole source of recovery would thus respond directly to the major problem facing product liability carriers - their uncertainty as to future loss costs.

Reduces Transaction Costs

Professor O'Connell has written extensively on the inefficiency of the litigation process, estimating that only 37.5 cents of each premium dollar ever reaches the pockets of claimants in products cases. Internal insurance industry data support Professor O'Connell's arguments that the workers'

**LOSS ADJUSTMENT EXPENSES
1970-1975**

Loss adjustment expense as % of earned premium



Source: A.M. Best Co. data for the total (stock & mutual)
property liability insurance industry.

compensation system would provide a far more efficient mechanism for paying reparations to people injured by products. As discussed in Chapter 1, the "permissible pure loss ratio" - that is, the ratio of dollars paid to claimants (excluding loss adjustment expenses) to dollars of premium earned used to calculate appropriate rates for various lines of insurance - is approximately 50 to 55 percent for general liability. For workers' compensation, the permissible loss ratio is approximately 70 percent.* This means that in their own internal planning, insurance carriers anticipate paying 15 to 20 cents more of each premium dollar earned to claimants on workers' compensation policies than to claimants on general liability policies.

Loss adjustment expenses, including legal fees, comprise the bulk of this differential. As shown in Exhibit B-II, the spread in the property liability industry's loss adjustment expenses between the workers' compensation and general liability lines averaged 12.9 points during the period 1970 to 1975. Furthermore, there is a considerable evidence that loss adjustment expenses for product liability are higher than for other forms of general liability due to greater legal defense costs. In addition, during this period commissions paid to agents and brokers averaged 8.5 points higher in general liability than in workers' compensation.

Moreover, plaintiffs' attorneys take from 25 to 40 percent of claimants' awards in product liability cases, with one-third being the most frequently quoted figure.** With the established benefit structure and no-fault aspects of a reparations system based on workers' compensation, plaintiffs' legal fees should be reduced enormously. Many workers' compensation claimants today file their claims with no legal expense. Even in complicated cases, insurers estimate that legal fees rarely exceed 10 percent of the amount awarded. In some jurisdictions, the amount a claimant's attorney may take from a workers' compensation award is regulated.

Thus, establishing workers' compensation as the sole source of recovery for workplace injuries provides the potential for significant financial savings.

* - The pure loss ratio for the stock industry for workers' compensation in 1975 was 75.9 percent, and the combined ratio was 104 percent. Adjusting the pure loss ratio to provide an overall combined ratio of 95 percent results in a pure loss ratio of 67.3 percent. Compensation carriers interviewed confirmed that the target pure loss ratio for workers' compensation is approximately 70 percent.

** - These figures are close to Professor O'Connell's estimate that only 37.5 percent of premium goes to claimants. Assuming each dollar of premium yields 55 cents in benefits, and plaintiffs' attorneys take one-third, claimants receive only $.667 \times 55$ cents, or 36.7 cents of each premium dollar. The ISO closed claim survey is expected to provide more specific data on premium dollar allocation.

on both sides of a case. Insurers could save 15 to 20 percent of the premium dollar in reduced loss adjustment expenses and lower commissions, and the claimant could save an equivalent or higher amount in his own legal fees. The combined result could nearly double the percentage of premium paid to claimants, from 33-38 percent to 65-70 percent. *

Finally, in addition to the financial savings, a workers' compensation-based reparation system would reduce uncertainty, delay, and mental anguish suffered by injured parties forced to pursue their claims through the tort litigation system. Professor O'Connell has described these costs vividly. He, along with many others, appear to argue that eliminating these difficult-to-quantify costs alone would justify a move to a no-fault type reparations system, even if the dollar savings of such a move would be negligible.

Reduces Stigma Of Litigation

A third benefit of a workers' compensation-based reparation system for products injuries is that, like a no-fault system, it has the potential for injured workers to receive awards without establishing blame on any party. Of course if such a system includes a fault-based mechanism for dividing responsibility for damages between product manufacturers and employers, this benefit would be lost.

* - It has been suggested that a complicated workers' compensation case costs significantly more than the average case, and that the difference in transaction costs between products-related compensation cases and straight products liability cases may be much less than the approximately 30 percent indicated here. While we have no hard data on this question, several casualty insurers have indicated in interviews that even the most difficult workers' compensation cases are less costly to resolve than complex products cases. In workers' compensation, the key issues to resolve are generally the extent of medical injury, and whether the injury occurred on the job. In products cases, the issues may include not only the extent of injury and whether the injury was caused by the alleged product, but also the myriad questions related to negligence. Moreover, the plaintiff's attorneys' fees in a compensation case are generally significantly lower than the contingent fees charged in a products case. See for example, Jeffery O'Connell, Ending Insult to Injury: No-Fault Insurance for Products and Services (Urbana, Illinois, University of Illinois Press, 1975) 254 pages.

Reduces Insurance Problems For Acutely Affected Industries

Establishing workers' compensation as sole source of recovery could significantly alleviate the product liability insurance problems faced by acutely affected industries such as the machine tool builders. The extent of help for these industries would depend upon the mechanism adopted for sharing damages between employer and manufacturer, but clearly any system which limits damages to the amount paid in workers' compensation benefits and which provides for some sharing of responsibility between employer and manufacturer would alleviate their insurance problems.

Moreover, the arguments for helping those industries with their insurance problems grow stronger as courts extend the concept of strict liability.

In workers' compensation, employers agreed to pay damages on a no-fault basis in return for limitation of awards. Product manufacturers feel that strict liability essentially makes them liable on a no-fault basis, but provides them with no limitation on awards.

POTENTIAL PROBLEMS WITH ESTABLISHING WORKERS' COMPENSATION AS SOLE SOURCE OF RECOVERY

Objections to establishing workers' compensation as the sole source of recovery for workplace injuries fall into three broad categories.

- ¶ Unjustifiably limiting workers' rights to recover damages
- ¶ Reducing safety incentives for manufacturers
- ¶ Increasing the cost of workers' compensation insurance to employers.

These three sets of objections are discussed in separate sections below. A fourth section describes why these and other problems make it appear that the collective bargaining approach to establishing workers' compensation is not worth pursuing at this time.

Unjustifiably Limiting Workers' Rights to Recover

Opponents of establishing workers' compensation as sole source of recovery argue that this would constitute an unreasonable and unjustified limitation of workers common law rights to recover damages. The argument continues that, although product liability insurance may pose a problem for a few industries or companies, the problems are not nearly as severe as those which prompted establishment of the workers' compensation system earlier in this century. At that time, the major motivating factor was the prospect of thousands of injured workers, unable to earn a living, with no source of income to provide for themselves or their families. In this case, one of the major motivating factors is the alleged "waste" of money on legal expenses by employers (or insurers) and workers. But even a generous estimate of the "extra" transaction costs for product liability litigation as compared with workers' compensation is equivalent to only \$1.20 per worker per month. *

* - This rough approximation is calculated as follows:

1. Total general liability premium was approximately \$3.8 billion in 1975. Round this to \$4 billion.
2. ISO estimates the products liability portion as 40 percent or \$1.6 billion.
3. O'Connell estimates that workplace accidents account for 30 percent or more of product liability claims or \$480 million in premium (30 percent x \$1.6 billion = \$480 million).
4. The previous discussion of loss adjustment and legal expenses for both sides in workers' compensation versus general liability showed the difference between the two lines to amount to approximately 30 percent of premium. This would amount to \$144 million (30 percent x \$480 million = \$144 million).
5. Of the 80+ million workers in the United States, let us say only 10 million work in jobs where they come in contact with equipment with heavy products liability exposure.
6. The "extra" costs associated with product liability insurance as opposed to workers' compensation would thus amount to \$14.40 per worker per year, or \$1.20 per month (\$144 million/\$10 million = \$14.40; \$14.40/12 = \$1.20).

Proponents of workers' compensation as sole remedy respond that the impact of product liability costs on acutely affected industries is far more severe than gross averages indicate and that any mechanisms which could reduce these costs while providing equitable compensation for injured employers should be pursued. *

Opponents of workers' compensation as sole remedy also argue that establishing workers' compensation as the sole source of recovery would lead to an unfair set of laws in which an individual injured by a product off the job could sue for damages, while a person injured by the same product while on the job could not.

Proponents of workers' compensation as sole remedy respond to this argument, however, by pointing out that under the current system a worker who falls off a ladder purchased by his employer could possibly win damages from the ladder manufacturer, while a worker who falls off a platform built by his employer has no recourse beyond workers' compensation. Moreover, some insurers point out that it may be fair and desirable to treat workplace products injuries differently from nonworkplace products injuries, even if the same products are involved. They argue that many of today's problems in product liability insurance have resulted from the courts' applying to employees' workplace injuries legal decisions which were originally based on nonworkplace injuries to consumers. Specifically, they argue it is fair to expect a higher degree of skill and familiarity with a product from an employee on his job than from an individual citizen outside the workplace.

Reducing Safety Incentives For Manufacturers

A second major objection to establishing workers' compensation as a source of recovery is that this would reduce manufacturers' incentives to improve the safety of their products. Opinion is sharply divided as to the importance of product liability premium expense as a motivator of product safety. Some argue that the connection between products premium and safety decisions is very indirect, reflecting previous safety practices (e.g., old product designs) rather than current practices. Others, including John V.

* - For example, if a company were paying 3 percent of sales in premium (\$30 per thousand), a 30 percent savings would amount to .9 percent of sales. For companies showing losses or marginal profits, this could be a significant factor. For example, the National Machine Tool Builders Association reports members paying up to \$29.53 per thousand dollars of sales, and the industry's after-tax profits amounted to 3.2 percent of sales in 1974, 2.4 percent in 1973, and losses in 1971 and 1972.

Brennan, Executive Vice President of the United States Aviation Underwriters, Inc., argue that the potential of tort liability has been an important incentive toward improving product safety. (See Brennan, "No-Fault Insurance in Aviation Products and Services - One Insurer's Viewpoint," Journal of Aviation Law and Commerce Southern Methodist University School of Law reprint).

The importance of responsibility for tort liability as an incentive toward safer products remains an unresolved question. The argument would be blunted, of course, if a proposal to establish workers' compensation as the sole source of recovery included a mechanism whereby manufacturers and employers could share responsibility for product-related injuries.

Increasing the Cost of Workers' Compensation Insurance to Employers

Employers and other groups maintain that workers' compensation plans in many states are already costly, and the burden is growing heavier due to recent benefit increases and new discoveries in the field of occupational disease. They thus oppose any proposal which would raise workers' compensation costs even more. These groups argue that raising compensation benefits in order to establish workers' compensation as sole source of recovery could solve a relatively isolated problem, high liability insurance costs for equipment manufacturers, and create a much larger one - high workers' compensation costs for all employers plus added incentives for malingering which accompany any increase in benefits.

Proponents of establishing workers' compensation as sole source of recovery respond that the proposal should not be viewed in isolation, but rather as part of an overall restructuring of workers' compensation benefits designed to enable the compensation system by itself to provide equitable benefits for injured workers. It is only one of several factors arguing for benefit adjustments. Another such consideration is the wide disparity in benefits currently provided by the various states (see Exhibit B-I above).

Moreover, workers' compensation sole source proponents argue, if courts and/or legislatures decide that the amount of money to be given to injured workers should increase, the workers' compensation system is a far less costly mechanism for accomplishing this than is the tort liability system.

Additional Problems with Collective Bargaining Approach

In addition to the two objections cited above, the collective bargaining approach to establishing workers' compensation as the sole source of recovery has at least three other potential problems. The first is that it would be very difficult for an employer to know exactly how much money he has saved in purchasing equipment or supplies due to his suppliers' lower insurance costs. Thus, he would not know how much he could give his employees in return for their bargaining away their third-party recovery rights.

Second, there is little reason to expect that the savings would be sufficient to make the proposal attractive to workers on strictly economic terms. As explained previously, it appears that the average savings would amount to less than \$1.20 per employee per month.

Finally, there is the problem that if not all groups of employees accept the bargain, a manufacturer's insurance savings would be reduced sharply. Insurance carriers could not reduce premiums substantially if a significant portion of a manufacturer's products were still being used in plants where workers have retained their rights to sue.

CONCLUSIONS AND FURTHER ANALYSIS NEEDED

With regard to the proposal to eliminate subrogation by insurance carriers in workers' compensation cases, the first step required is to document the potential benefits of such a move. As discussed previously, preliminary data seem to indicate that eliminating workers' compensation subrogation would not materially improve the price or availability of product liability insurance. However, a move to eliminate the subrogation clause from the workers' compensation policy could nevertheless reduce insurance industry costs sufficiently to make it worthwhile for some members of the industry to pursue it.

As indicated above, the proposal to permit raising of employers' negligence as a defense in subrogation actions is already under consideration by the Federal Workers' Compensation Task Force.

As for the idea of making workers' compensation the sole source of recovery for workplace injuries, our conclusion is that this should be given high priority for further development and evaluation. As explained above,

however, the concept should be explored as part of an overall evaluation of the workers' compensation system and the desirable level of benefits. Thus, further evaluation of establishing workers' compensation as sole remedy should be included in the responsibility of the existing Federal Workers' Compensation Task Force, if that effort is continued.

The first step required is, again, to document the number of cases and the dollars of claims which would be involved. The ISO study should provide a good indication of what this has been in the past, and insurance carriers could begin to track workplace-related products claims along with other data on product liability insurance to provide information on current trends.

At the same time, proposals to increase the overall level of workers' compensation benefits should be developed and analyzed as to their additional cost.

After that, there will remain the various nonquantifiable issues discussed above, particularly the equity of limiting workers' rights to sue while leaving nonworkers' rights alone, and the importance of the tort system and product liability insurance as incentives toward development of safe products.

B.3 - NO-FAULT COMPENSATION SYSTEMS

In more than 100 interviews with insurance industry executives, we found no one who believes that either general no-fault or elective no-fault mechanisms could be implemented successfully. However, the majority of those interviewed feel that making workers' compensation the sole source of recovery for workplace injuries is essentially a no-fault concept, and that this idea appears very promising. As described previously in our discussion of workers' compensation as sole remedy, we agree that this concept should be pursued. As for broader applications of no-fault, we believe that far less drastic and more easily implemented remedies can deal with the product liability problem. The following sections comment upon four of the most significant issues raised by product liability no-fault proposals:

- ¶ Automobile No-Fault Analogy
- ¶ Coverage Definition
- ¶ Threshold Level
- ¶ Application of Collateral Sources of Recovery.

The problems discussed in these sections, particularly those dealing with the automobile no-fault analogy and coverage definition, explain our conclusion that other remedies appear more promising.

AUTOMOBILE NO-FAULT ANALOGY

Two of the most important distinctions between automobile and product liability no-fault insurance are those related to the parallel circumstances of accident victims and the need for safety incentives.

Parallel circumstances of accident victims. A key factor underlying no-fault automobile insurance is that there is a basic similarity between the circumstances of the parties involved in an accident. For the most part, they are either operators or passengers in motor vehicles, and almost all of the motor vehicles are insured. Ideally, in fact, they are insured under similar plans. For example, no-fault plans either break down or become very complicated when a collision involves autos from different states, only one of which has a no-fault plan. This basic parallelism of circumstances is not the case in product liability cases. There is no universal accident

insurance carried by all potential victims of a product-related injury, nor is this likely. Moreover, even if such a step were mandated it would quite possibly increase total insurance costs to a point that would override any administrative efficiencies brought about by no-fault. On the other hand, leaving all insurance responsibility to manufacturers raises the coverage questions discussed below.

Need for legal safety incentives. There is no question as to the strong incentives for all automobile operators to avoid accidents no matter what laws of liability are in effect. The same is not necessarily true for products. For automobile drivers, the consequences of unsafe driving may be serious injury or death. For product manufacturers, the consequences of selling unsafe products may be injuries to other people, and possibly a product liability suit. Although it is not possible to make a definitive statement as to the precise impact of tort liability as an incentive toward development of safer products, it is clear that tort liability is more of a factor for product manufacturers than it is for automobile operators.

Given these important differences between automobile and product liability no-fault, it could be argued that the most relevant comparison is to point out that for the most part, automobile no-fault has not solved the problems it was intended to solve. Admittedly, automobile no-fault has not been fully implemented as originally intended. Nonetheless, it is fair to expect that if a concept such as automobile no-fault, which has many theoretical advantages, has had tremendous difficulties in implementation, a concept with the theoretical problems associated with product liability no-fault would be even more difficult to implement.

COVERAGE DEFINITION

Creating a workable definition of coverage is perhaps the most difficult aspect of the no-fault product liability proposals. It has been pointed out that if a product liability no-fault statute covered "all injuries caused by the use of a product," the number of claims would be overwhelming. Most attempts to define coverage more precisely use language either so broad that it would provide a basis for a flood of new claims, or so vague that judicial judgment on each case would be required. For example, if injuries caused by product "misuse" are excluded, one of the law's major existing uncertainties is left unchanged. These are exactly the problems no-fault is attempting to solve.

Professor O'Connell's "elective no-fault" proposal, which permits manufacturers to select the coverages they desire, does not appear feasible or

equitable from the consumer's standpoint. A major problem would be to prevent manufacturers from electing coverages in problem areas ('adverse selection' of coverages) rather than working to solve the problems. The task of regulating such coverages to prevent abuses would be an overwhelmingly complex one, even for the strongest of regulating agencies. Simply updating coverages to reflect new products or the discovery of unforeseen misuses would be a major undertaking.

The most drastic proposal for overhauling an injury compensation system is the 'New Zealand Plan,' under which all personal injuries are covered. This plan thus supplants several lines of insurance, including automobile bodily injury, workers' compensation, and product liability bodily injury. Benefits to accident victims include full medical coverage, lump-sum payments for loss of use of part of the body or for disfigurement, and 80 percent of lost wages. In workplace injuries, employers are required to maintain compensation for the first week; the Accident Compensation Commission, which administers the overall program, takes over after that. Funding for the program is provided by a tax on drivers licenses and automobile registration, a wage tax with a sliding scale from 25 cents to \$5 per \$100 of wages depending upon the injury exposure in the job, and general tax revenues to cover nonautomobile injuries to people who do not earn direct wages, such as homemakers and visitors to the country.

Analysis of the potential application of a New Zealand-type plan to the United States is beyond the scope of the present study. However, it should be noted that product liability premiums, including both bodily injury and property damage coverages, were estimated at under \$2 billion for 1975. At the same time, workers' compensation premiums were nearly \$6 billion, and private passenger and commercial automobile bodily injury premiums were estimated at slightly over \$9 billion. Thus it seems clear that although a concept such as the New Zealand Plan may warrant further study, proposals involving such major segments of our overall insurance system go far beyond the immediate problems under consideration.

THRESHOLD LEVEL

The critical element in establishing an appropriate threshold level for no-fault, above which litigation would be permitted, is determining the distribution pattern of claim cost by size of award. Such an analysis would indicate the number of claims settled for relatively moderate amounts, for example, under \$10,000. If this number proves to be a significant percentage of the total, no-fault would have the potential for considerable savings due to

lower administrative and legal expenses. On the other hand, some insurers suspect that establishing a threshold level would tend to set a ceiling under which a large number of nonmeritorious claims would enter, thereby raising the cost of the mechanism, and possibly offsetting the legal and administrative savings.

In any event, the data required for an analysis of alternative threshold levels is not now available. However, sufficient data for a preliminary analysis may be available through the Insurance Services Office's closed-claim study, tentatively scheduled for completion in early 1977.

APPLICATION OF COLLATERAL SOURCES OF RECOVERY

Assuming a no-fault system were to be developed for products liability, there are two conflicting theories of law that relate to the question of how to apply collateral sources of recovery. The first theory argues that the purpose of a legal reparations system is to "make whole" a person who has suffered an injury. This point of view argues that evidence of collateral sources of recovery should be subtracted from the final amount of the award. The second theory argues that the party responsible for a loss should pay the entire cost of the loss. Recoveries from other sources would therefore be irrelevant. By its very nature, a no-fault system eliminates the second argument. Thus, there seems little question that evidence of collateral sources of recovery should be considered in establishing a no-fault judgment.

Whether these other sources of recovery should be deducted from the no-fault award might turn on the question of the adequacy of the scale established for benefits. If the scale is sufficient to cover full out-of-pocket costs (medical expenses and economic loss), then it would seem reasonable that collateral sources would be deducted from the final no-fault award. Alternatively, the degree to which collateral sources are deducted from the final award could be left to the discretion of the courts, based upon an evaluation of the extent of noneconomic injury in the case. If the no-fault benefits are less adequate, then collateral sources of recovery could be used to help bridge any gap that might exist.

B. 4 - MANDATORY ARBITRATION

In this memorandum we describe our findings and conclusions concerning the mandatory use of arbitration for the settlement of product liability claims. These findings are based upon our interviews with insurance company underwriting and claim personnel, and with insurance producers.

The idea has been advanced that the relatively expensive and time consuming court fact-finding and award determination process involved in settling product liability disputes can be simplified and made more accurate by adopting mandatory arbitration, presumably in accordance with the rules of the American Arbitration Association. An important assumption is that the tort law of damages would remain unchanged.

Experience with the use of arbitration for settling medical malpractice disputes and elsewhere indicates that compulsory arbitration must be nonbinding in order to avoid violating an individual's right to trial. Voluntary binding arbitration, of course, can be used by agreement of the parties involved, but any assurance of broad implementation is precluded by the very nature of the voluntary approach.

Thus, in our judgment, only compulsory, nonbinding arbitration, with the right of full judicial review, holds any prospect for significantly reducing product liability insurance costs.

Insurers, in the main, feel that arbitration could be beneficial in some situations. These include cases where lengthy fact-finding would involve the time of highly skilled specialists and cases where inter-company disputes occur between manufacturer and their customers arising out of injuries to the customer employees.

The suggestion has also been made that arbitration be used to settle small (less than \$3,000) product claims on the theory that these claims may otherwise go uncompensated. Insurers do not view small claims or uncompensated claims as a problem demanding their attention at this time.

Overall, the benefits in terms of more accurate, less administratively costly awards from the use of arbitration could be important if arbitrators are: (1) fairly selected; (2) expert in matters of products liability; and (3) well grounded in clearly defined rules of arbitration.

Most insurers we interviewed were skeptical, however, that these criteria would be met. Their experience with arbitration in the private passenger automobile business has led them to this conclusion. They made frequent references to their feelings that arbitrators are often selected from the plaintiffs' bar, and that they are somewhat inconsistent in the procedures they follow.

To be sure, if effective safeguards were introduced to ensure fair treatment, and if expert arbitrators and knowledgeable products specialists were enlisted, many insurers would favor the use of mandatory, nonbinding arbitration. While insurers are willing to experiment further, they would be wary of making any anticipatory risk selection and pricing adjustments prior to assessing the impact of nonbinding arbitration in practice.

B.5 - TORT LAW MODIFICATIONS

A central theme emerging from our interviews with insurance executives and analyses of underwriting files is that to the extent that there is a crisis in product liability insurance, it has been caused less by known increases in claims costs than by high and increasing uncertainty about future suits and settlements. Increasing costs and resulting underwriting losses are occasionally cited as reasons for rate increases or coverage denials, but poor underwriting results have plagued other lines of insurance during the past 2 years without creating the "crisis" atmosphere surrounding product liability. The problem in product liability insurance, in the view of many underwriters, is that in addition to the increasing flow of losses they see coming in from product liability coverages, they feel they have no way of knowing what the future holds in terms of new theories of liability, eroding validity of traditional defenses, or escalating concepts of appropriate compensation for loss or injury.

This view of product liability crisis as one of uncertainty underlies three other general observations that apply to almost all of the tort reforms discussed

- ¶ Insurers' reactions to specific proposals vary depending upon individual experience
- ¶ Little immediate impact can be expected from most tort reforms
- ¶ Impact of Federal action would be much stronger than state action.

These observations are discussed in the sections below, followed by separate comments on each of the reforms presented with the exception of "Prohibition of Subrogation in Workers' Compensation Cases," which is discussed in a separate section.

INSURERS' REACTIONS VARY WITH INDIVIDUAL EXPERIENCE

The lack of agreement among insurers on fundamental questions facing their industry is often surprising to outsiders. The product liability problem is no exception. There is wide variation among the insurers surveyed in their reactions to the various tort reform proposals, reflecting the very different experiences of those commenting. In no case could we fairly describe any of the reactions discussed below as anything like an industry consensus.

The various industry trade associations are working to develop industry statements on many of the issues at hand, but even when they do there will likely continue to be dissenting opinions. To the extent there is agreement, it is more often on what will not work as opposed to what will. As described later, the one remedy receiving the most favorable reaction as an idea which seems feasible and would have at least some beneficial impact on the insurance market is a modified statute of limitations. However, even this endorsement is mitigated by those who see important factors limiting its impact.

LITTLE IMMEDIATE IMPACT SEEN FOR MOST TORT REFORMS

Almost all insurers surveyed are careful to distinguish between their reactions to a remedy as an idea in itself, and their assessments of its likelihood of acceptance in the legislatures or courts. Thus while there are several tort reforms which many agree could improve the products situation significantly, almost all insurers also agree that they would want to be very sure that the remedy would "hold up in court" and have the favorable impact intended before they could change their underwriting philosophy. Several cite automobile no-fault as an instance where insurance companies responded too quickly and either reduced or failed to increase their rates in anticipation of savings which never materialized. The argument by no-fault proponents that their original concept was distorted beyond recognition is no compensation to the companies losing money on automobile insurance. Similar distortions could happen to other legal remedies. Thus it could take 3 or 4 years or more before the full benefit of tort remedies would be realized.

IMPACT OF FEDERAL ACTION STRONGER THAN STATE ACTION

Product liability rates are based upon national experience, not individual state experience. Moreover, unlike the situation with medical malpractice insurance, where a doctor's practice is primarily confined within a single state, products may give rise to damage claims anywhere. Almost all insurers agree that the impact of tort reforms in individual states would be negligible, at least until a substantial majority of the states had enacted the legislation. For example, several insurers praise Connecticut's recent enactment of a statute of limitations as a step in the right direction, but also point out that a single state's statute is not a sufficient basis for any change in underwriting philosophy. All assessments of impact in the discussion of

individual tort remedies which follow are based on the assumption that the remedy is to become the "law of the land," not simply law in an individual state.

* * *

The remainder of this section consists of our comments, based upon interviews with insurers and analysis of underwriting practices, on the following proposed changes in the tort litigation system:

- ¶ A 1(a)(i) Basic Standard of Responsibility: "Unavoidably Unsafe Product" Limitation
- ¶ A 1(a)(i) Basic Standard of Responsibility: Useful Life
- ¶ A 1(a)(ii) Compliance With Standards Defense
- ¶ A 1(a)(iii) Modification of the Statute of Limitations Defense
- ¶ A 1(a)(iv) State of the Art Defense
- ¶ A 1(a)(v) Establishment of a Misuse Defense
- ¶ A 1(a)(vi) Comparative Negligence or Fault
- ¶ A 1(b)(i) Attorneys' Fees
- ¶ A 1(b)(ii) Regulation of Awards for Pain and Suffering
- ¶ A 1(b)(iv) Modification of the Collateral Source Rule
- ¶ A 1(b)(v) Punitive Damage Restrictions
- ¶ A 1(b)(vi) A Periodic Payment System
- ¶ A 1(c)(i) Contribution and Indemnity
- ¶ A 1(c)(ii) Hold Harmless Clauses

A 1(a)(i) BASIC STANDARD OF RESPONSIBILITY:"UNAVOIDABLY UNSAFE PRODUCT" LIMITATION

Most insurers surveyed feel that this reform would have little impact on the insurance market for several years, until the courts had been given ample opportunity to interpret whatever language was used in the legislation. It is felt that in today's legal environment, subjective words such as "unavoidably unsafe" might do little more than previous attempts (e.g., "unreasonably dangerous") to clarify the situation. Nonetheless, almost all insurers interviewed decry the "total confusion" they feel surrounds products case law today and feel clarification of manufacturers' basic standard of responsibility for "unavoidably unsafe" products could improve insurance availability in the long term.

A 1(a)(i) BASIC STANDARD OF RESPONSIBILITY: USEFUL LIFE

Establishment of useful product lives for durable product could help alleviate insurance availability problems for some manufacturers, but most insurers say they would be unwilling to reduce premiums until they had 3 to 5 years of data on the legal impact of a useful life limitation.

Moreover, while insurers agree that a "useful life" rule could be more flexible and potentially more equitable than a flat statute of limitations, many feel that the uncertainty associated with any administrative or judicial procedure for establishing useful lives would possibly reduce and certainly delay any rate impact as compared with a statute of limitations modification.

A 1(a)(ii) COMPLIANCE WITH STANDARDS DEFENSE

It is widely agreed that establishing compliance with standards as either an absolute defense or as a basis for sharply limiting a manufacturer's liability (Professor Weinstein's suggestion) would have a tremendous impact on both availability and premium. At the same time, however, almost all insurers state that this reform seems so contrary to legal precedents and trends and they could not realistically expect it to be enacted or, if enacted, to survive court challenges.

Al(a)(iii) MODIFICATION OF THE
STATUTE OF LIMITATIONS DEFENSE

A statute of limitations defense based on time of sale is the one tort reform most often singled out in our interviews as having the greatest potential to improve the insurance market within a short time (1 to 2 years) after enactment. We therefore comment on this tort reform more extensively than the others, discussing first the reasons why some insurers feel optimistic about its potential impact, and second the factors which others feel would tend to limit any impact.

REASONS FOR OPTIMISM

Those optimistic about the impact of a modified statute of limitations cite two principal reasons for their feelings. First, a limitation would eliminate underwriters' fears of claims arising from very old products and provide a clearly delineated basis for underwriting judgment. One underwriter points out that a relative handful of losses from old products can have an impact on underwriting judgment far out of proportion to its statistical significance. Given the highly judgmental nature of products underwriting, this underwriter argues, removing the specter of claims from old product would cause underwriters to view manufacturers of durable product much more favorably.

The second basis for optimism is similar, but less specific. Another underwriter states that enactment of a Federal statute of limitation would indicate to him a "change in attitude" in the legal system. Such a change would encourage underwriters to be more receptive to products risks in general. He feels that although it might not lead to a reduction in rates, a Federal statute of limitations would at least improve the availability situation. (Note that this reaction in itself is a striking indication of the degree of judgment which enters into risk selection and pricing in the products area.)

FACTORS LIMITING IMPACT

A number of other underwriters, while saying they would welcome any reform such as a modified statute of limitations which would tend to reduce the uncertainty they face in underwriting products risks, stress factors

which they feel limit or raise questions regarding the impact a modified statute of limitations could have. These underwriters focus on the following questions:

- ¶ What kind of products should be covered by a modified statute of limitations?
- ¶ What is the statistical significance of claims on old products?
- ¶ What effect would a single remedy by itself have?

Each of these questions is discussed below.

Products That Might Be Covered By a Modified Statute of Limitations

Several insurers feel that establishing a flat or standard limitation period for all products would not be equitable because of the wide variation in product lives. On the other hand, they feel that establishing a "useful life" schedule for all products would probably prove to be impractical. However, those concerned about the inequity of a common limitation for all products agree that the concept could be well applied to products where the primary risk is traumatic injury, particularly machinery used in the industrial workplace. This could help several of the industries most severely affected by the product's problem. For chemicals, pharmaceuticals, or any other product for which the principal risk is long term or incremental injury, however, it appears that an equitable statute of limitations would have to be so long as to eliminate any insurance impact.

Statistical Significance of Claims On Old Products

Underwriters least optimistic about the impact of a statute of limitations point out that while losses from old products make great "coffee break conversation" they wonder whether they actually appear to constitute a significant percentage of the losses. Thus, these insurers feel a statute of limitations would provide little basis for changing either price or availability of insurance. (All underwriters cite the need for more data to support such assertions and look forward to the information expected from the ISO closed claim study.)

Inadequacy of Single Remedy

Another response to the statute of limitations proposal comes from a senior underwriter who points out that almost every one of the tort reforms proposed responds to a different problem currently plaguing products liability insurance. He continues that simply alleviating one problem would not be sufficient justification for changing his company's underwriting posture. While this comment would apply to most of the proposed tort reforms, it is particularly appropriate in this context because a statute of limitations is often cited as the most attractive tort remedy, and some states have enacted such a statute in hopes of solving the product's problem.

Al(a)(iv) STATE OF THE ART DEFENSE

Insurers cite the tendency of courts to hold manufacturers responsible for technological advances achieved subsequent to the sale of a product as one of the most frustrating aspects of products litigation. Many agree that if a reliable state of the art defense could be established, it would have a significant impact on products insurance availability and cost. However, most also agree that the prospects for clearly establishing such a defense are slim. If a new law were enacted, most feel they would have to take a "wait and see" approach while the law was being tested and interpreted in the courts. Only after several years could they change their underwriting philosophy based on a new state of the art defense. Among the specific problems cited are:

- ¶ Conflicting experts with conflicting opinions as to the state of the art at a given time. It is hard to imagine what legislative language would avoid this.
- ¶ Establishing reliable guidelines detailing when a manufacturer must recall products to retrofit new improvements (also, if increased recalls are mandated, the problem of pricing the recall risk would increase).
- ¶ Dealing with top of the line versus lower priced products. A lower priced product could serve many uses without incorporating all aspects of the state of the art. How would these products be defended?

Despite these problems, several insurers feel that the current lack of a state of the art defense, particularly in some jurisdictions, is so inequitable that efforts should be made to improve it. A committee of the American Insurance Association is working to develop model language in this area.

Al(a)(v) ESTABLISHMENT OF A MISUSE DEFENSE

Product misuse is another source of "horror story" claims among insurers, and many feel a solid misuse defense would have a significant impact on both premiums and availability. However, few insurers interviewed see much prospect of the legal system's adopting a misuse defense which manufacturers or insurers could rely upon.

To compound current uncertainties in this area, it is not even clear what documentation or warning of foreseeable misuses is required. A legal clarification of hazard documentation requirements should be feasible, and provided the requirements are "realistic" they could possibly alleviate product liability problems for some manufacturers. Again, insurers would want to see the impact of such changes in their loss figures before altering their underwriting guidelines.

A second aspect of product misuse of concern to insurers and manufacturers is alteration of a product by a user (or a user's employer). Although proposals have been made which would bar recovery if a product has been altered, few feel that such a drastic step would be accepted by legislatures or courts.

Al(a)(vi) COMPARATIVE NEGLIGENCE OR FAULT

Reaction is mixed as to potential impact of a comparative negligence doctrine. A few insurers feel it would have some impact on insurance availability, but none on price. The majority feel it would have little impact on either price or impact and cite the following.

- ¶ The "feeling" (no statistics) that it has made little difference in the states that have tried it.
- ¶ The concern that juries would base awards on perceived ability to pay, rather than on an actual comparison of negligence.

Nonetheless, many insurers feel that apportioning losses among parties involved in a case based upon their relative responsibility for the losses is inherently equitable and therefore favor adoption of a comparative negligence doctrine.

Al(b)(i) ATTORNEYS' FEES

New Jersey has taken the lead in limiting contingent fees for plaintiff's attorneys, but most insurers agree it is too early to determine the insurance market impact of this move. Assessments of the impact of a broader (possibly Federal) move to limit attorneys' fees are divided. Some insurers feel that a limitation is called for on equity grounds (excessive fees are "unfair") but foresee no significant impact on insurance availability or price. Others believe that limiting attorneys' fees would not improve availability, but would tend to reduce price. It is not true, this latter group contends, that limitation of attorney fees would not affect the size of awards. They cite interviews and studies of jury behavior which indicate that when juries deliberate upon the size of an award, they often escalate their intended award to the plaintiff by their estimates of attorney fees and income taxes (even though the latter should not be a factor, since damage awards are not taxable). Again, however, even those optimistic about the impact of attorney fee limitations agree that insurers would have to wait to see the impact of fee limitations on total losses before reducing insurance premiums.

A second issue relating to attorneys' fees is the proposal to require plaintiffs to pay defendants' legal fees if the plaintiff loses a case. Although they are not optimistic about the political prospects of such a proposal, several insurers feel that it would lead to savings which would eventually be reflected in lower insurance costs. Others feel it would be meaningless in many cases because the plaintiff simply would not have the financial resources to pay defense costs.

Al(b)(ii) REGULATION OF

AWARDS FOR PAIN AND SUFFERING

The concept of regulating awards for pain and suffering is generally favored by insurers interviewed, but there is divergent reaction as to the effect it would have on the insurance market. Some fear the courts would find a way to "get around" any limitation and thus blunt much of the potential

impact of proposal. Others feel the impact could be substantial, depending upon the limit used, but remain skeptical of implementation prospects because of constitutional and social acceptability questions.

Several insurers are more optimistic, however, and cite the workers' compensation experience as an example of the feasibility of establishing some schedule or limitation of awards. Underwriters at one company say the impact of a limitation on pain and suffering awards would be high and immediate and feel that the proposal is indeed feasible. Another underwriter adds that establishing some limitation or schedule for overall awards would have far greater impact than limiting attorney fees. This underwriter points out that some plaintiffs' attorneys are motivated to seek "unreasonable" awards not only by desire to increase their own ultimate payment, but also by fear of an attorney's malpractice suit if they fail to ask for a huge settlement. Thus a limitation on awards would reduce uncertainty on both sides.

As for the question of regulation either by establishing a schedule of awards or by limiting pain and suffering to a maximum percentage of economic damages, most insurers respond that the key objective is to reduce uncertainty and that either method has the potential to accomplish this.

However, at least two objections to the percentage of economic damage approach are cited. The first is that although both approaches seem somewhat arbitrary, the percentage approach is more arbitrary. The schedule approach at least attempts to base award limitations on the extent or type of injury itself rather than on the surrogate measure of direct expenses. The second objection, voiced by a few underwriters, is that the percentage approach gives plaintiffs an incentive to malingering or otherwise attempt to maximize their direct expenses. Each additional dollar of direct expenses would be reimbursed along with a directly proportionate surcharge for pain and suffering.

A quantitative estimate of the potential impact of various pain and suffering award limitations should be possible when the ISO closed claim study is completed.

Al(b)(iv) MODIFICATION OF THE
COLLATERAL SOURCE RULE

Although the concept of permitting evidence of collateral sources of recovery in products litigations strikes many as a reasonable and feasible reform, insurers surveyed do not all agree that the existing collateral source rule should be modified. Moreover, even among those who support such a modification, there is wide variation in their assessment of its impact on the insurance market. This variation in responses again illustrates the lack of data on products losses. Some underwriters feel the products problem is as much one of frequency of claims as one of severity (ISO study will provide some hard data on this), and that if products insurance were allowed to stand behind other coverages, particularly accident and health coverages, the impact on rates and availability could be significant. (It should be noted that a modification of the collateral source rule should not increase accident or health insurance costs since the proposal is not to increase the burden on these coverages, but rather to reduce products carriers' payments by the amount already paid by other carriers.)

Other underwriters maintain that the products problem is being caused primarily by the prospects of an increasing number of large settlements. Admission of collateral source evidence, these underwriters argue, would therefore have little or no impact on either insurance cost or availability for products liability.

Moreover, a number of insurers do not object to double payment to victims who have been prudent enough to secure their own accident or medical insurance. These insurers would like to see a distinction between so-called "public" sources of recovery, such as workers' compensation, Social Security, or Medicare, and "private" insurance arrangements. They feel products awards should be reduced by the amount of recovery from the public sources only. They reason that allowing an offset for recoveries from private sources as well would essentially penalize the more prudent individuals.

Finally, a minority of insurers do not even support admitting collateral source recoveries as evidence. They argue that the individual or corporation responsible for the loss should pay the entire cost of the loss. Recoveries from other sources, in their judgment are irrelevant. Despite these objections, however, we conclude that the idea of permitting evidence collateral sources of recovery has sufficient merit in terms of both equity and potential cost savings to warrant active consideration for adoption.

Al(b)(v) PUNITIVE DAMAGE RESTRICTIONS

Most insurers surveyed favor the elimination of punitive damage awards, feeling that the existence of insurance undermines the rationale for such awards. However, almost all agree that the impact on the insurance market of eliminating or limiting punitive damage awards would be far less than that of limiting pain and suffering awards.

Several underwriters state that although they have no data on hand on this specific question, they feel there have been relatively few cases with punitive damage awards. (Note: The ISO study will provide specific data on this point, but not until January or February 1977.) Those most pessimistic about the impact of punitive damage restrictions go on to say that even if punitive damage awards were restricted, juries could award similar amounts under another name. Thus punitive damage restrictions would have to be part of a remedy package limiting overall awards.

Other insurers feel restricting punitive damages is important even taken by itself. They point out that the punitive damage situation is one of several product liability problems which seem to be getting worse, and that even if such awards have not been a major factor in the past, the fear of a deteriorating situation could still affect underwriting judgment today. Abolishing punitive damage awards would at least eliminate one source of underwriters' concern.

Finally, several insurers acknowledge that punitive damage awards appear to be solidly entrenched in the American legal system, and suggest that if they cannot be eliminated, funds paid as punitive damages should go into a state fund to be used for loss control efforts, rather than to a specific individual or group of plaintiffs.

Al(b)(vi) A PERIODIC PAYMENT SYSTEM

Many insurers interviewed favor the concept of a periodic payment system, but few feel it would have a major impact on solving the product liability problem. Almost all agree it would have no impact on insurance availability. Those industries having difficulty obtaining products coverage would not be helped by a periodic payment system. Several underwriters feel that, over the long term, a periodic payment system would tend to have favorable impact on insurance costs, but again, it would be several years before the results would show up in loss statistics.

At least two specific questions are raised in conjunction with periodic payment proposals. The first concerns whether periodic payments should be simply permitted or whether they should be required once damage awards exceed a certain level. The second deals with the feasibility and implementation details of such a system.

There appears to be no opposition among insurers that periodic payments should be permitted in court settlements. Periodic payments or annuities may be used for out-of-court settlements, and there seems to be no basis for precluding their use for court settlements. There is less agreement that periodic payments should be required when damages exceed a set limit. Many benefits of periodic payments are recognized, including reducing excessive lump-sum jury awards, avoiding windfalls to claimants who recover more quickly than expected, and ensuring adequate resources for a claimant throughout a prolonged or lifetime period of disability. However, there may be cases where a lump-sum settlement is preferable. One example is when a disabled individual is able to use the lump sum to invest in a new business he is capable of pursuing despite his disability. In fact, workers' compensation carriers do at times attempt to develop a lump-sum payment for permanently disabled workers when they feel it would be beneficial for the individual involved.

As for feasibility, both workers' compensation and long-term disability insurance provide evidence of the feasibility and implementation procedures for a periodic payment system.

Al(c)(i) CONTRIBUTION AND INDEMNITY

Most of the discussion of expanded contribution involves products used in the industrial workplace. Although there are significant arguments favoring moves to establish a simple legal mechanism permitting contribution by all parties responsible for an injury, particularly by employers partially responsible for workplace injury, few insurers feel contribution would materially improve the overall insurance market. In fact, there are reasons to believe that unlimited contribution could actually expand current problems in product liability insurance. However, it appears that a legal change permitting contribution by employers limited to the amount of workers' compensation payments could help achieve many of the benefits attributed to expanded contribution without exacerbating insurance problems.

ADVANTAGES OF CONTRIBUTION

Several insurers interviewed agree that the need to put incentives for loss prevention upon all parties who can help avoid losses argues strongly for establishment of a simple legal mechanism for permitting contribution by employers when it can be shown that an employer was at least partially at fault in causing an injury. However, none favors any legal change which would increase the number of suits between manufacturers and employers. Rather, if contribution is to be permitted at all, the mechanism should be one where the damages can be apportioned at the same time as the damage verdict is given. Separate actions should not be encouraged.

IMPACT ON INSURANCE MARKET

Despite the favorable loss prevention incentives which contribution would provide, there is little agreement that contribution would have a favorable impact on the insurance market. Most insurers point out that it only shifts the costs among insureds; it does not reduce the losses. Thus overall premiums paid could not decrease. Moreover, although several underwriters believe that contribution could alleviate the acute insurance availability problem faced by machinery manufacturers, others fear that permitting unlimited contribution by employers would only multiply the number of insureds for which the products risk would be a major uncertainty.

In the absence of hard data, only qualitative assessment of these positions is possible. If underwriters could feel that they could predict with any confidence what total products losses would be in a coming year, expanded contribution would make it easier to spread this risk over a much higher number of insureds. This would indeed reduce the acute problems faced by a few manufacturers.

However, underwriters feel completely incapable of predicting future losses in the products area. This uncertainty is pervading their underwriting judgment, influencing them either to reject risks outright or to escalate premiums judgmentally for each manufacturer of high-hazard products. It thus seems entirely possible that if legislation were enacted facilitating contribution by employers, the current problems of insurance availability and high premiums for a few manufacturers could actually be extended into many new industries.

Finally, several underwriters argue that legislation facilitating contribution by employers would erode if not abandon the original bargain struck in workers' compensation legislation. Workers would retain their right to automatic payment regardless of fault in workplace injuries, but also regain their common law rights to sue for damages beyond those awarded under the compensation system.

Most of these objections to contribution would be met, however, if the amount of contribution for which an employer could be held responsible were limited to the amount paid under workers' compensation. In this case, a manufacturer would be responsible for the same amount as he would be in the absence of a products claim. The result of this change would be similar to that of permitting manufacturers to raise employers' negligence as a defense in workers' compensation subrogation cases. This idea is being considered by the Federal Workers' Compensation Task Force. It appears that the result in either case would be an improvement over the current situation. Acutely affected manufacturers could potentially obtain at least some relief from their products liability costs (to the extent of workers' compensation benefits) and employers would be given greater incentives for loss control.

A 1(c)(ii) HOLD HARMLESS CLAUSES

Hold harmless clauses are obviously intended to shift the problem rather than solve it. No insurer interviewed feels that strengthening these clauses would have any meaningful overall impact on the current difficulties in the insurance market. However, it could shift part of the problem away from acutely affected industries, such as the machine tool industry. Thus, strengthening the validity of hold harmless clauses in specific applications might be desirable. However, care must be taken to prevent excessive use of market power by a monopolistic or dominant supplier of products to compel purchasers to accept hold harmless clauses.



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